UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

IN RE LIBOR-BASED FINANCIAL INSTRUMENTS ANTITRUST LITIGATION

MDL No. 2262

Master File No. 1:11-md-2262-NRB

THIS DOCUMENT RELATES TO:

ECF Case

THE BERKSHIRE BANK, GOVERNMENT DEVELOPMENT BANK FOR PUERTO RICO and DIRECTORS FINANCIAL GROUP Individually and On Behalf of All Others Similarly Situated,

Plaintiffs,

Civil Action No. 12-CV-5723-NRB
13-CV-01016-NRB

v.

BANK OF AMERICA CORPORATION; BANK OF AMERICA, N.A.; BANK OF TOKYO MITSUBISHI UFJ LTD.; BARCLAYS BANK PLC; BRITISH BANKERS' ASSOCIATION; BBA ENTERPRISES LTD.; BBA LIBOR LTD.; CITIGROUP, INC.; CITIBANK, N.A.; COÖPERATIEVE CENTRALE RAIFFEISENBOERENLEENBANK B.A.; CREDIT SUISSE GROUP AG; DEUTSCHE BANK AG; HSBC HOLDINGS PLC; HSBC BANK PLC; JPMORGAN CHASE & CO.; JPMORGAN CHASE BANK, NATIONAL ASSOCIATION; LLOYDS BANKING GROUP PLC; HBOS PLC; ROYAL BANK OF CANADA; THE NORINCHUKIN BANK; THE ROYAL BANK OF SCOTLAND GROUP PLC; UBS AG; WESTLB AG; and WESTDEUTSCHE IMMOBILIENBANK AG,

Defendants.

SECOND AMENDED CONSOLIDATED CLASS ACTION COMPLAINT

JURY TRIAL DEMANDED

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Plaintiffs The Berkshire Bank ("Berkshire"), Government Development Bank for Puerto Rico ("GDB"), and Directors Financial Group ("DFG") (collectively, "Plaintiffs"), individually and on behalf of all others similarly situated, by their undersigned attorneys, for its Second Amended Class Action Complaint against Defendants (defined below), allege upon personal knowledge as to themselves and their own acts, and upon information and belief as to all other matters, based on, *inter alia*, the investigation conducted by and through their attorneys, which included, among other things: a review of the Defendants' public documents; review of regulatory materials; review of scholarly research and other expert analysis; review of pleadings and other materials filed in the multi-district litigation; review of wire and press releases; and other obtainable information:

NATURE OF THE ACTION

1. This is an action brought asserting claims of common law fraud and conspiracy to commit fraud on behalf of all lending institutions headquartered in the states and territories of the United States that originated, purchased outright, or purchased a participation interest in, loans paying interest at rates tied to the U.S. Dollar London Interbank Offered Rate ("USD LIBOR" or, in some contexts, "LIBOR"),[1] the interest rate of which adjusted at any time between August 1, 2007 and May 31, 2010, inclusive (the "Class Period"). Plaintiffs and the Class suffered damages as a result of Defendants' fraudulent conduct in artificially decreasing the USD LIBOR

[1] Although USD LIBOR is by far the most important currency denomination in which LIBOR is reported, the BBA also calculates and reports LIBOR rates for borrowing costs in non-dollar currencies, such as the Pound, Euro, and Yen. This action addresses USD LIBOR, which was the focus of Defendants' fraud.

rate during the Class Period, causing them to receive lower interest than they would have been entitled but for Defendants' fraud.

2. LIBOR is a benchmark rate indexed to trillions of dollars in loans and interest-rate swaps that plays a fundamentally important role in financial systems throughout the world. As set forth more fully below, Defendants on the USD LIBOR panel as well as the British Bankers' Association ("BBA") touted LIBOR as a simple, transparent benchmark calculated from competitive interest rates in the market for unsecured interbank loans. In truth, however, the Defendants fraudulently and collusively suppressed USD LIBOR.

3. The BBA described LIBOR as "the primary benchmark for short term interest rates globally." Consistent with the BBA's description, USD LIBOR is the "primary benchmark" for short-term interest rates in the United States (including its territories), and in particular in the State of New York, its banking capital. As an analyst for a division of Defendant Citigroup explained:

> LIBOR is by far the most popular floating-rate index in the world. Its importance has evolved far beyond its humble roots as an interbank lending rate. LIBOR touches everyone from the largest international conglomerate to the smallest borrower in Peoria: It takes center stage in every interest rate swap (whether it is explicitly part of the cash flow or not) and the great majority of floating-rate securities and loans. As such, the functionality and relevance of LIBOR is of primary importance to the global financial system.

S. Peng, C. Gandhi, A. Tyo, *Special Topic: Is LIBOR Broken?*, April 10, 2008 (Citigroup Capital Markets).

4. Hundreds of billions of dollars of floating-rate loans are originated or sold within the United States (including its territories) each year with rates tied to USD LIBOR. Typically, a floating-rate loan (whether residential or commercial), will be issued at a base rate and will reset periodically to a rate set by adding a premium to the current rate of USD LIBOR (e.g., USD

LIBOR + 3%). As a result, a misrepresentation in the referenced USD LIBOR rate on the date on which a loan resets will generally reduce the amount of interest that a lender receives by an equivalent amount.

5. USD LIBOR is calculated mechanically each business day and published under the auspices of the BBA. The BBA defines USD LIBOR as:

> The rate at which an individual Contributor Panel bank could borrow funds, were it to do so by asking for and then accepting inter-bank offers in reasonable market size, just prior to 11:00 [a.m.] London time.

This definition has been in place since approximately 1998.

6. The BBA and the other Defendants, who were each Contributor Panel banks (or the holding companies for Contributor Panel banks) for the USD LIBOR panel, knew and understood that it was common practice during the Class Period for banks throughout the United States to issue floating-rate loans tied to USD LIBOR rates. Indeed, Defendants who were on the panel themselves transacted in loans tied to USD LIBOR rates, and referenced USD LIBOR rates in their own analyses of the U.S. financial services sector. Accordingly, it was not only foreseeable but obvious that by manipulating the rate of USD LIBOR, Defendants would impair the interest income received by Plaintiffs and other lenders providing USD LIBOR-tied loans.

7. Despite knowing that manipulating USD LIBOR could profoundly impact vast quantities of financial transactions, The Contributor Panel bank Defendants repeatedly made intentionally false representations about their borrowing costs to the BBA, which the BBA then published, resulting in the artificial suppression of USD LIBOR rates during the Class Period, and causing significant damages to Plaintiffs and the Class.

JURISDICTION AND VENUE

8. The claims asserted herein arise under the common law of the State of New York, and/or the common law of the other states and territories in the United States of America.

9. This Court has original jurisdiction over this action pursuant to 28 U.S.C. § 1332(d) because it is brought as a putative class action, because there is diversity of citizenship between one or more Plaintiffs and one or more Defendants, and because it involves amounts in controversy exceeding $5,000,000.

10. Venue is proper in this District pursuant to 28 U.S.C. § 1391(b). Many of the acts and transactions alleged occurred in substantial part in this District. All Defendants maintain offices or agents, transact business, and/or are found within the Southern District of New York. A substantial part of the interstate commerce giving rise to the claims described in this Complaint was carried out, in part, within the Southern District of New York. Defendants performed acts in furtherance of their conspiracy within the Southern District of New York and elsewhere that were intended to affect, and did affect, Plaintiffs and others located within the Southern District of New York.

11. This Court has personal jurisdiction over each of the Defendants by virtue of their business activities in this jurisdiction. All Defendants transacted business and derived substantial revenue from that business within New York. Most, if not all, Defendants have offices located in New York and/or have engaged in a regular and continuous course of business in New York. Some Defendants are resident corporations of New York, with their headquarters or primary place of business located within the state. Furthermore, all Defendants acted as co-conspirators with each other. Defendants purposefully availed themselves of the privilege of conducting

activities in the United States and the Southern District of New York in connection with the wrongful activities described in this Complaint.

PARTIES

12. Plaintiff Berkshire is a banking corporation chartered by the State of New York that, as part of its normal business activities, originated and purchased, either outright or as a participation interest, loans tied to USD LIBOR. During the Class Period, The Berkshire Bank owned or held interests in loans tied to USD LIBOR that were issued to borrowers located or domiciled within the states of New York, New Jersey and Georgia. Many loans extended by Berkshire were originated or purchased prior to Defendants' suppression of USD LIBOR. Other loans were originated or purchased after the suppression of USD LIBOR began. If Berkshire had known that USD LIBOR was being suppressed then Berkshire would have used the Eurodollar deposit rate benchmark published daily by the Federal Reserve Bank of New York ("Fed Eurodollar Rate"), or would have used interest rate swaps to fix the interest rate payable on the loans on the date the loans were originated.

13. For more than 30 years, the London interbank market has been a major source of cash for banks seeking to fund USD denominated loans. The London interbank market has enabled banks in need of cash to obtain deposits of U.S. dollars, either on an overnight basis or for fixed terms (typically, one, two, three or six months), from banks with excess cash.

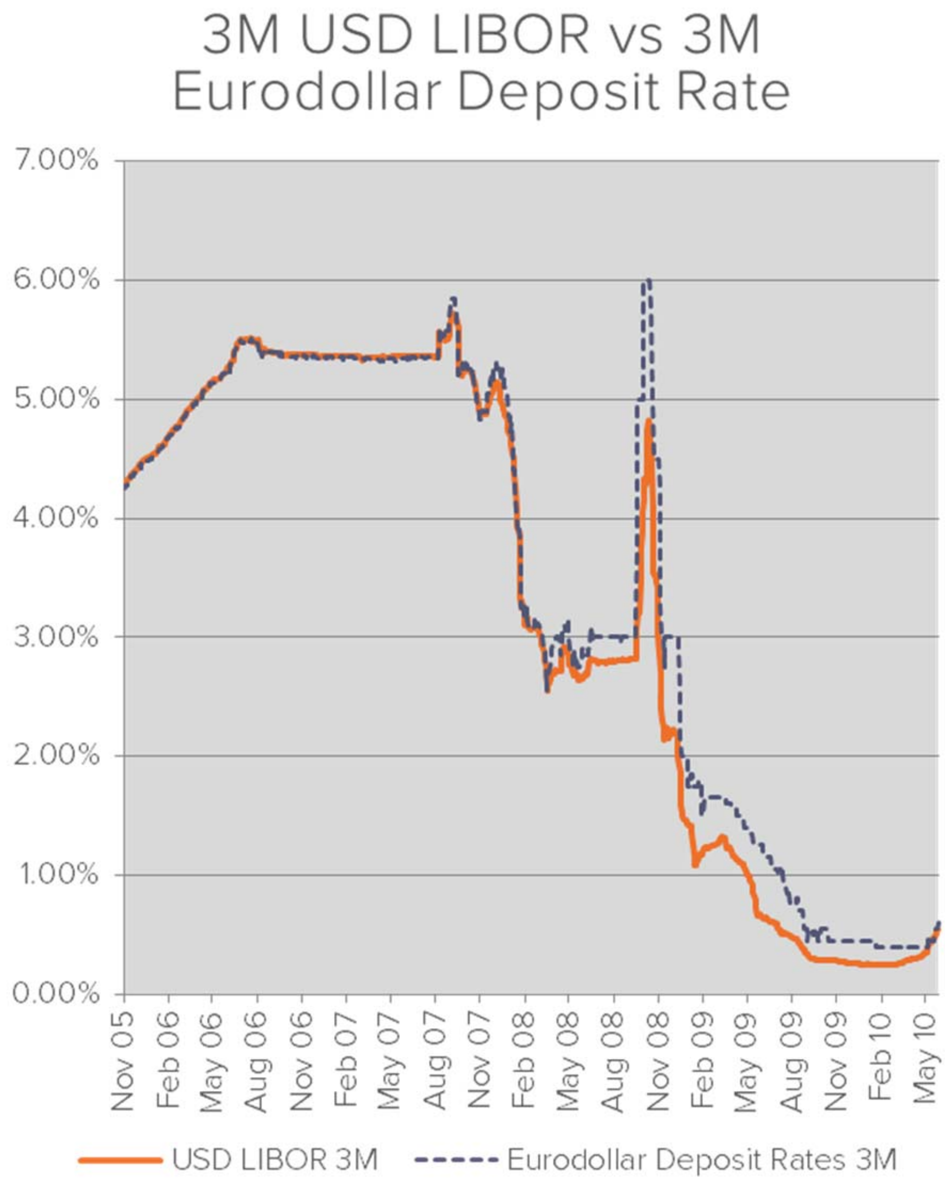
14. Plaintiff's experts calculated damages on the Berkshire loans according to three alternative methodologies: (a) using Fed Eurodollar Rates as alternative floating benchmark to USD LIBOR; (b) using swap rates and (c) using "true LIBOR" rates. We refer to these rates as the "Alternative Interest Rates".

15. The Fed reports Eurodollar deposits at the rate at which banks want to borrow funds, known as the bid side. The BBA quotes USD LIBOR at the rate at which banks offer funds, or the offer side. The Fed Eurodollar Rate is calculated based on a larger sample of contributors than USD LIBOR, making it less susceptible to manipulation. The Fed Eurodollar Rate is an ideal alternative to USD LIBOR for adjustable rate loans.

16. Interest rate swaps could have been used by Berkshire to fix the interest rate payable on each loan and to reduce the Berkshire's exposure to interest rate fluctuations. On any business day, banks and other market participants can exchange USD LIBOR indexed cash flows for any tenor of USD LIBOR (e.g. 1, 3 or 6 month) and loan term (e.g. 10, 15 or 30 years) for fixed rate cash flows at the then prevailing market conditions. The USD LIBOR swap market is one of the most liquid financial markets in the world with over $1.4 trillion of notional value turn over on a daily basis.[2] The primary methodology used by financial institutions to set fixed rate loans in lieu of adjustable USD LIBOR denominated loans is by reference to these interest rate swap rates. Berkshire often originates fixed rate loans. Plaintiffs' experts analyzed each loan identified below by pricing interest rate swaps corresponding to the amortization schedule of each loan. For each loan below, Plaintiffs' experts priced the swap on the date that the relevant loan was approved in order to find the fair fixed interest rate payable by the borrower which would have been exchangeable, in the swap market for the relevant USD LIBOR tenor (e.g. 1, 3 or 6 month) plus margin agreed under the loan for the specified term of the loan (e.g. 10, 15 or 30 years). This methodology provides the payments that Berkshire would have received on each loan had such loan been a fixed rate loan, rather than an adjustable rate loan tied to USD LIBOR.

[2] Figures as of April 2013

17. Plaintiffs' experts also calculated "true LIBOR" during the Class Period. They analyzed the historical spread between 3-month USD LIBOR and the 3-month Fed Eurodollar Rate. As the chart below illustrates, these two rates are highly correlated. During the period from November 2005 – July 2007, the average spread was 1 basis point.



18. Plaintiffs' experts then regressed the Fed Eurodollar Rate against USD LIBOR during the two years prior to the beginning of the Class Period for each of the 1, 3, and 6-month

tenors. In each case, the regression gave an R-squared of approximately 99%, demonstrating a near perfect fit. These regression statistics were then used to predict USD LIBOR during the Class Period using the contemporary values of the Fed Eurodollar Rate. The result is the "true LIBOR" rate during the Class Period.

19. For each loan identified below, damages have been estimated as follows.

a. For each interest reset date, the corresponding alternative interest rate (i.e. Eurodollar Deposit Rate + margin, fixed rate and "true LIBOR") was determined;[3]

b. The amount of interest received by Berkshire according to the USD LIBOR indexation was calculated;

c. The amount of interest hypothetically received by Berkshire according to the Alternative Interest Rates was calculated;

d. Damages were then calculated as the sum of the interest payments that would have been received by Berkshire during the Class Period if the loans were indexed to the Alternative Interest Rate minus the interest payments received using the LIBOR indexation.

20. Berkshire suffered damages on the following loans as identified:

a. On or about July 5, 2006, Berkshire issued an amortizing loan in the amount of $1,389,000 as part of a purchase of a 50% participation interest in a 15-year adjustable mortgage of 60 equal principal payments, plus interest in the amount of

[3] For the swap rates methodology the interest rate used is the same on each reset date.

$2,778,00, with an interest rate of 3 Month USD LIBOR + 2.00%, adjustable quarterly.

i. If USD LIBOR had not been suppressed, Berkshire would have received approximately an additional $8,458.79 in interest payments.

ii. If Berkshire had used the 3 Month Eurodollar Deposit rate rather than USD LIBOR (which were highly correlated prior to Defendants' suppression of USD LIBOR), Berkshire would have received approximately an additional $11,894.63 in interest payments.

iii. If Berkshire had used USD LIBOR determined interest rate swaps to fix the interest rate payable on the loan upon origination, the fixed rate would have been 4.96% and Berkshire would have received approximately an additional $73,618.72 in interest payments.

b. On or about September 25, 2006, Berkshire issued a 15-year amortizing loan of 60 quarterly equal principal payments, plus interest in the amount of $2,000,000, secured by a mortgage on the borrower's property. The interest rate was 3 Month USD LIBOR + 2.00% adjusted quarterly.

i. If USD LIBOR had not been suppressed, Berkshire would have received approximately an additional $12,227.78 in interest payments.

ii. If Berkshire had used the 3 Month Eurodollar Deposit rate rather than USD LIBOR (which were highly correlated prior to Defendants' suppression of USD LIBOR), Berkshire would have received approximately an additional $17,090.25 in interest payments.

iii. If Berkshire had used USD LIBOR determined interest rate swaps to fix the interest rate payable on the loan upon origination, the fixed rate would have been 5.46% and Berkshire would have received approximately an additional $133,423.74 in interest payments.

c. On or about February 15, 2007, Berkshire issued a 20-year amortizing real estate loan of quarterly payments in the amount of $1,352,000 with an interest rate of 3 month USD LIBOR + margin, adjusted quarterly.

i. If USD LIBOR had not been suppressed, Berkshire would have received approximately an additional $7,347 in interest payments.

ii. If Berkshire had used the 3 Month Eurodollar Deposit rate rather than USD LIBOR (which were highly correlated prior to Defendants' suppression of USD LIBOR), Berkshire would have received approximately an additional $7,161 in interest payments.

iii. If Berkshire had used USD LIBOR determined interest rate swaps to fix the interest rate payable on the loan upon origination, the fixed rate would have been 4.99% and Berkshire would have received approximately an additional $68,116 in interest payments.

d. On or about July 14, 2006, Berkshire issued a revolving commercial loan of quarterly payments in the amount of $7,364,000, with an interest rate of 1 Month USD LIBOR + a variable margin, adjusted quarterly.

i. If USD LIBOR had not been suppressed, Berkshire would have received approximately an additional $750 in interest payments.

ii. If Berkshire had used the 3 Month Eurodollar Deposit rate rather than USD LIBOR (which were highly correlated prior to Defendants' suppression of USD LIBOR), Berkshire would have received approximately an additional $650 in interest payments.[4]

e. On or about May 2, 2007, Berkshire issued a 5-year revolving loan of $5 million consisting of quarterly interest payments and payment of principal at maturity. The loan had an interest rate of 1 Month USD LIBOR + 2.00%, adjusted quarterly.

i. If USD LIBOR had not been suppressed, Berkshire would have received approximately an additional $14,299 in interest payments.

ii. If Berkshire had used the 1 Month Eurodollar Deposit rate rather than USD LIBOR (which were highly correlated prior to Defendants' suppression of USD LIBOR), Berkshire would have received approximately an additional $30,756 in interest payments.

iii. If Berkshire had used USD LIBOR determined interest rate swaps to fix the interest rate payable on the loan upon origination, the fixed interest rate would have been 4.73% and Berkshire would have received approximately an additional $329,158 in interest payments.

f. On or about January 7, 2008, Berkshire issued a 15-year amortizing loan of 60 quarterly equal principal payments, plus interest in the amount of $440,000 with an interest rate of 3 Month USD LIBOR + 2.00, adjusted quarterly.

[4] As a revolving loan with an irregular draw-down schedule, the USD LIBOR determined interest rate swap method does not apply.

i. If USD LIBOR had not been suppressed, Berkshire would have received approximately an additional $2,778 in interest payments.

ii. If Berkshire had used the 3 Month Eurodollar Deposit rate rather than USD LIBOR (which were highly correlated prior to Defendants' suppression of USD LIBOR), Berkshire would have received approximately an additional $4,156 in interest payments.

iii. If Berkshire had used USD LIBOR determined interest rate swaps to fix the interest rate payable on the loan upon origination, the fixed interest rate would have been 3.76% and Berkshire would have received approximately an additional $17,112 in interest payments.

21. Attached at Appendix B are charts as to each of the above loans, identifying the damages sustained by Berkshire as to each loan payment during the Class Period utilizing each of the methods discussed.

22. Plaintiff GDB is a bank chartered in the Commonwealth of Puerto Rico by legislation known as Act 17 of September 23, 1948. In addition to serving as the fiscal agent and financial advisor for the Puerto Rican Government, GDB is a substantial lender and provides financing to private enterprises (as well as public entities) in order to boost the island's economic development. During the Class Period, GDB owned or held interests in loans tied to USD LIBOR which were issued to individuals and entities located or domiciled in the Commonwealth of Puerto Rico.

23. Plaintiff DFG is a finance lender headquartered in Corona del Mar, California that, as part of its normal business activities, originated and purchased, either outright or as a participation interest, loans tied to USD LIBOR. During the Class Period, DFG owned or held

interests in loans tied to USD LIBOR that were issued to borrowers located or domiciled within the states of California, Arizona, Washington, Nevada, Oregon, Hawaii, Wyoming, Texas, New Mexico, Maryland and Florida. For example, DFG issued the following loans:

a. On December 11, 2007, a loan in the amount of $548,000 with a maturity date of January 1, 2038 and an interest rate based on 1-year LIBOR (which at the date of origination converted to 6.750%). The adjustable interest rate of the loan was 1-year LIBOR + 2.250%. The loan was sold by DFG during the Class Period at a price determined by a "premium discount rate", which was a function of, *inter alia*, the LIBOR rate as of the date of the sale as compared to the LIBOR rate at the date of origination. As a result of Defendants' fraudulent suppression of LIBOR, DFG received lower interest rates on this loan and ultimately sold this loan for a lower purchase price than it would have had the true LIBOR rates been reported.

b. On July 30, 2008, a loan in the amount of $158,400 with a maturity date of August 1, 2038 and an interest rate based on 1-year LIBOR (which at the date of origination converted to 6.500%). The adjustable interest rate of the loan was 1-year LIBOR + 2.250%. The loan was sold by DFG during the Class Period at a price determined by a "premium discount rate", which was a function of, *inter alia*, the LIBOR rate as of the date of the sale as compared to the LIBOR rate at the date of origination. As a result of Defendants' fraudulent suppression of LIBOR, DFG received lower interest rates on this loan and ultimately sold this loan for a lower purchase price than it would have had the true LIBOR rates been reported.

c. On September 10, 2009, a loan in the amount of $417,000 with a maturity date of October 1, 2039 and an interest rate based on 1-year LIBOR (which at the date of origination converted to 3.750%). The adjustable interest rate of the loan was 1-year LIBOR + 2.250%. The loan was sold by DFG during the Class Period at a price determined by a "premium discount rate", which was a function of, *inter alia*, the LIBOR rate as of the date of the sale as compared to the LIBOR rate at the date of origination. As a result of Defendants' fraudulent suppression of LIBOR, DFG received lower interest rates on this loan and ultimately sold this loan for a lower purchase price than it would have had the true LIBOR rates been reported.

d. On March 11, 2010, a loan in the amount of $356,000 with a maturity date of April 1, 2040 and an interest rate set based on 1-year LIBOR (which at the date of origination converted to 3.875%). The adjustable interest rate of the loan was 1-year LIBOR + 2.250%. The loan was sold by DFG during the Class Period at a price determined by a "premium discount rate", which was a function of, *inter alia*, the LIBOR rate as of the date of the sale as compared to the LIBOR rate at the date of origination. As a result of Defendants' fraudulent suppression of LIBOR, DFG received lower interest rates on this loan and ultimately sold this loan for a lower purchase price than it would have had the true LIBOR rates been reported.

24. Defendant Bank of America Corporation is a Delaware corporation headquartered in Charlotte, North Carolina. Defendant Bank of America, N.A.—a federally chartered national banking association, a Delaware corporation, headquartered in Charlotte, North Carolina with

offices in New York—is an indirect, wholly-owned subsidiary of Defendant Bank of America Corporation. Bank of America Corporation was at all relevant times a member of the USD LIBOR panel. Defendants Bank of America Corporation and Bank of America, N.A. are referenced collectively in this Complaint as “Bank of America.” Bank of America operated in the United States directly or through its wholly owned and/or controlled subsidiaries, affiliates, agents, and predecessors. Bank of America participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

25. Defendant Bank of Tokyo-Mitsubishi UFJ Ltd. (“BTMU”) is a Japanese subsidiary of Mitsubishi UFJ Financial Group, Inc. and is headquartered in Tokyo, Japan, with an office in New York. BTMU was at all relevant times a member of the USD LIBOR panel. BTMU operated in the United States directly or through its wholly owned and/or controlled subsidiaries, affiliates, agents, and predecessors.[5] BTMU participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

26. Defendant Barclays Bank plc (“Barclays”) is a United Kingdom public limited company headquartered in London, England, with two offices in New York. Barclays was at all relevant times a member of the USD LIBOR panel. Barclays operated in the United States directly or through its wholly owned and/or controlled subsidiaries, affiliates, agents, and predecessors.[6] Barclays participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

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[5] Bank of Tokyo-Mitsubishi UFJ, *Global Network- The Americas,* http://www.bk.mufg.jp/englishlourcompany/globalnetworklamericas.html#USA.

[6] Barclays, *Barclays in the United States,* http://group.barclays.com/about-barclays/about-us/usa

27. The BBA is a trade association based in the United Kingdom. Throughout the 2000s, the BBA owned LIBOR. The BBA is governed by a Board, which officially meets four times per year, comprised of the BBA Chief Executive and Chief Executives of other Defendants. Defendant BBA Enterprises Ltd. is a wholly owned subsidiary of the BBA located in London. In late 2009, the BBA incorporated a new legal subsidiary, Defendant BBA LIBOR Ltd., to govern LIBOR.[7]

28. As set forth more fully below, the BBA advertised LIB OR and solicited business in the United States, including in the Southern District of New York. In 2007, the BBA sought and obtained a trademark for bbaLIBOR™ from the United States Patent and Trademark Office (Registration No. 3212218). At all times relevant to the claims asserted herein, the BBA electronically communicated news and information through internet websites (bba.org, bbalibor.org), the Thomson Reuters website (reuters.com), the Wall Street Journal, and through other data vendor websites including International Data Corp. ("IDC"), which maintains an office in New York.[8] At all times relevant to the claims asserted herein, the BBA also published LIBOR data to more than one-million computer screens around the world, including in the United States and the Southern District of New York.[9] In 2009, the BBA launched a Twitter

[7] David Enrich & Max Colchester, *Before Scandal, Clash over Control of Libor,* Wall St. J., Sept. 11,2012, http://online.wsj.com/article/SB10000872396390443847404577631404235329424.html.

[8] BBA, *Welcome to bbalibor, Frequently Asked Questions (FAQs),* http://www.bbalibor.com/explained/faqs; IDC Worldwide Offices, http://www.idc.com/about/wwoffices.jsp.

[9] BBA, *bbalibor Explained, Frequently Asked Questions (FAQs), supra* note 5.

social media service news feed to bypass the print media[10] because interest in LIBOR had soared "since so many loans are linked to it."[11]

29. Defendant Citigroup, Inc. is a Delaware corporation headquartered in New York, New York. Defendant Citibank, N.A.—a federally-chartered national banking association headquartered in New York, New York—is a wholly-owned subsidiary of Defendant Citigroup, Inc. Defendants Citigroup, Inc. and Citibank, N.A. are referenced collectively in this Complaint as "Citi" Citi was at all relevant times a member of the USD LIBOR panel. Citi operated in the United States directly or through its wholly owned and/or controlled subsidiaries, affiliates, agents, and predecessors. Citi participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

30. Defendant Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A. ("Rabobank") is a financial services provider headquartered in Utrecht, the Netherlands, and an office in New York. Rabobank was at all relevant times a member of the USD LIBOR panel. Rabobank operated in the United States directly or through its wholly owned and/or controlled subsidiaries, affiliates, agents, and predecessors.[12] Rabobank participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

31. Defendant Credit Suisse Group AG ("Credit Suisse") is a Swiss company headquartered in Zurich, Switzerland. Credit Suisse was at all relevant times a member of the USD LIBOR panel. Credit Suisse operated in the United States directly or through its wholly

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[10] BBA, *Capital Markets Bulletin*, 5 (June 2009).

[11] BBA, *BBA LIBOR: The World's Most Important Number Now Tweets Daily*, May 21,2009.

[12] Rabobank Group, *Are We Somewhere Near You?*, https://www.rabobank.com/en/locateus/index.html.

owned and/or controlled subsidiaries, affiliates, agents, and predecessors.[13] Credit Suisse participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

32. Defendant Deutsche Bank AG ("Deutsche Bank") is a German financial services company headquartered in Frankfurt, Germany, with numerous offices including a regional head office in New York. Deutsche Bank was at all relevant times a member of the USD LIBOR panel. Deutsche Bank operated in the United States directly or through its wholly owned and/or controlled subsidiaries, affiliates, agents, and predecessors.[14] Deutsche Bank participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

33. Defendant HSBC Holdings plc is a United Kingdom public limited company headquartered in London, England. Defendant HSBC Bank plc—a United Kingdom public limited company headquartered in London, England—is a wholly-owned subsidiary of Defendant HSBC Holdings plc. HSBC Holdings plc was at all relevant times a member of the USD LIBOR panel. Defendants HSBC Holdings plc and HSBC Bank plc are referenced collectively in this Complaint as "HSBC." HSBC operated in the United States directly, or through its wholly owned and/or controlled subsidiaries, affiliates, agents, and predecessors.[15] HSBC participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

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[13] Credit Suisse, *Office Locator*, https:llwww.creditsuisse.com/who_we_are/enloffice_locator.jsp

[14] Deutsche Bank, *Welcome to Deutsche Bank USA*, https:llwww.db.com/us/ (locations)

[15] HSBC, *Customer Service: Find HSBC Branches and ATMs*, http://www.us.hsbc.com/l/2/home/customer-service/hsbc-locations/branch

34. Defendant JPMorgan Chase & Co. is a Delaware corporation headquartered in New York, New York. JPMorgan Chase & Co. was at all relevant times a member of the USD LIBOR panel. Defendant JPMorgan Chase Bank, N.A.—a federally chartered national banking association headquartered in New York, New York—is a wholly-owned subsidiary of Defendant JPMorgan Chase & Co. Defendants JPMorgan Chase & Co. and JPMorgan Chase Bank, N.A. are referenced collectively in this Complaint as "JPMorgan." JPMorgan operated in the United States directly or through its wholly owned and/or controlled subsidiaries, affiliates, agents, and predecessors. JPMorgan participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

35. Defendant Lloyds Banking Group plc ("Lloyds") is a United Kingdom public limited company headquartered in London, England, with an office in New York. Defendant Lloyds was formed in 2009 through the acquisition of Defendant HBOS plc ("HBOS")—a United Kingdom banking and insurance company headquartered in Edinburgh, Scotland—by Lloyds TSB Bank plc. Prior to 2009, HBOS and Lloyds TSB Bank plc were members of the USD LIBOR panel. Lloyds Banking Group plc joined the USD LIBOR panel upon its formation in 2009. Lloyds operated in the United States directly or through its wholly owned and/or controlled subsidiaries, affiliates, agents, and predecessors.[16] Lloyds participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

36. Defendant Royal Bank of Canada ("RBC") is a Canadian corporation headquartered in Toronto, Canada, with affiliates in New York. RBC was at all relevant times a member of the USD LIBOR panel. RBC operated in the United States directly or through its wholly owned

[16] Lloyds Banking Group, *Life with Us: Locations International locations,* http://www.lloydsbankinggroup-careers.com/viewI213/intemational-Iocations.html

and/or controlled subsidiaries, affiliates, agents, and predecessors.[17] RBC participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

37. Defendant The Norinchukin Bank ("Norinchukin") is a Japanese cooperative bank headquartered in Tokyo, Japan, with an office in New York. Norinchukin was at all relevant times a member of the USD UBOR panel. Norinchukin is one of Japan's largest institutional investors and has a reputation as Japan's largest hedge fund. Norinchukin operated in the United States directly or through its wholly owned and/or controlled subsidiaries, affiliates, agents, and predecessors.[18] Norinchukin participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

38. Defendant The Royal Bank of Scotland Group plc ("RBS") is a United Kingdom public limited company headquartered in Edinburgh, Scotland, with an office in New York. RBS was at all relevant times a member of the USD LIBOR panel. RBS operated in the United States directly or through its wholly owned and/or controlled subsidiaries, affiliates, agents, and predecessors.[19] RBS participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

39. Defendant UBS AG ("UBS") is a Swiss corporation based in Basel and Zurich, Switzerland, with offices in New York. UBS was at all relevant times a member of the USD LIBOR panel. UBS was formed in 1998 through the merger of Swiss Bank Corporation and the

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[17] RBC Bank, *About RBC Bank*, http://www.rbcbank.com/about-us/cid-296623.html

[18] Norinchukin Bank, *About The Norinchukin Bank- Global Network*, http://www.nochubank.orjp/en/about/globalnetwork.html.

[19] RBS, *About RES Group*, http://www.rbsbank.co.jp/en/about-us/about-rbs-group.

Union Bank of Switzerland. UBS operated in the United States directly or through its wholly owned and/or controlled subsidiaries, affiliates, agents, and predecessors.[20] UBS participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

40. Defendant WestLB AG is a German joint stock company headquartered in Dusseldorf, Germany. Defendant Westdeutsche ImmobilienBank AG—a German company headquartered in Mainz, Germany—is a wholly-owned subsidiary of WestLB AG. Defendants WestLB AG and Westdeutsche ImmobilienBank AG are referenced collectively in this Complaint as "WestLB." WestLB operated in the United States directly or through its wholly owned and/or controlled subsidiaries, affiliates, agents, and predecessors. WestLB participated in the wrongful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

41. Defendants Bank of America, BTMU, Barclays, Citi, Rabobank, Credit Suisse, Deutsche Bank, HSBC, JPMorgan, Lloyds, HBOS, RBC, Norinchukin, RBS, UBS, and WestLB (collectively, "Panel Bank Defendants", and with BBA, BBA Enterprise Ltd. and BBA LIBOR Ltd., "Defendants") were members of the BBA's USD LIBOR Contributing Panel during the Class Period.

42. The acts charged in this Complaint as having been done by Defendants were authorized, ordered, or done by their officers, directors, agents, employees, or representatives, while actively engaged in the management of Defendants' businesses or affairs.

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[20] UBS, *UBS Location Finder,*
http://appsl.ubs.com/locationfinder/searchForm.do?GeoEntityId=3&GeoEntityType=3.

43. Various other individuals, companies, corporations, partnerships, associations, and other entities, the identities of which are unknown to the Plaintiffs, and which cannot presently be named as defendants in this action, may have participated as co-conspirators with Defendants in the violations alleged in this Complaint, and/or performed substantial acts and made statements in the Southern District of New York in furtherance of the alleged violations.

44. At all relevant times, Defendants were acting as the agents, employees, co-conspirators, and/or representatives of their respective "affiliates" and were acting within the course and scope of their agency, employment, and/or conspiracy with the full knowledge, consent, permission, authorization, and ratification, either express or implied, of each of their respective affiliates in performing the acts alleged in this Complaint.

BACKGROUND

45. USD LIBOR is the most important benchmark that lending institutions throughout the country, including Plaintiffs and the Class, use to set interest rates for floating rate loans. During the Class Period, the Panel Defendants were on the panel from which USD LIBOR rates were set, and provided false information on their own borrowing costs which was incorporated into USD LIBOR rates, having the effect of artificially lowering such rates.

I. INTERBANK LENDING AND CREATION OF LIBOR

46. Banks obtain cash from other banks in "money markets," primarily through short-term loans. In a competitive market, banks with superior credit risk and liquidity profiles will, all else equal, be able to obtain more attractive interbank interest rates. As a result, the interest that banks charge each other reflects the cost of cash in a competitive market.[21]

[21] *See, e.g.*, Financial Times, *Lexicon – Definition of LIBOR, available at*

47. For more than 30 years, the London interbank market has been a major source of cash for banks seeking to fund USD denominated loans. The London interbank market has enabled banks in need of cash to obtain deposits of U.S. dollars ("Eurodollar deposits"), either on an overnight basis or for fixed terms (typically, one, two, three or six months), from banks with excess cash.

48. The fundamental principle underlying floating interest rates is to let the market determine the cost of money.[22] The BBA created LIBOR in 1986 as a tool to help its members set interest rates on large corporate loans issued collectively by multiple banks. Over the years, LIBOR increased in importance as banks began incorporating it into financial contracts. Based on the BBA's representations regarding LIBOR's asserted "objectivity and accuracy," LIBOR developed into the primary benchmark for short-term interest rates globally and is now indexed to trillions of dollars' worth of financial instruments, including commercial loans, mortgages, and interest-rate swap contracts.[23] Financial institutions around the world, including Plaintiffs, reasonably relied on LIBOR as an honest and accurate benchmark of a competitively determined interbank lending rate.

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http://lexicon.ft.com/Term?term=LIBOR; The Wheatley Review of LIBOR: Final Report, 75-77 (Sept. 12. 2012) ("Wheatley II"), *available at* http://cdn.hmtreasury.gov.uk/wheatley_review_libor_finalreport_280912.pdf; *see also* BBA, *Frequently Asked Questions*, *supra* note 5 (noting that LIBOR is "extremely market sensitive and affected by a number of factors").

[22] *See, e.g.*, Jonathan Macey, *LIBOR: Three Scandals in One – A Commentary by Jonathan Macey '82*, July 20, 2012, http://www.law.yale.edu/news/15826.htm.

[23] BBA, *bbalibor Explained, The Basics*, http://www.bbalibor.com/explained/the-basics (last visited Mar. 11, 2014); BBA, *Understanding The Construction And Operation Of BBA LIBOR – Strengthening For The Future* (June 10, 2008), *available at* http://www.aciforex.org/docs/markettopics/20080610__BBA_comments_on_Libor_fixing.pdf.

II. CALCUALTION OF LIBOR

49. During the relevant time period, the BBA calculated and disseminated LIBOR for 15 maturities (from overnight to 12 months) and for 10 currencies (Australian Dollar, Canadian Dollar, Swiss Franc, Danish Krone, Euro, Sterling, Japanese Yen, New Zealand Dollar, Swedish Krona and USD). The USD LIBOR is the result of a calculation based upon submissions from a panel of banks for that currency (the "Contributor Panel" and "Contributor Banks") selected by the BBA. During most of the Class Period, the Contributor Panel for USD LIBOR consisted of 16 banks, including Panel Bank Defendants.[24] The BBA represented that Contributor Banks were chosen based on their scale of market activity, credit rating, and perceived expertise in the currency concerned.[25] These selection criteria were intended to show that Contributor Banks would have the best and most accurate knowledge of interbank borrowing costs for each currency.

50. No regulatory agency oversees the setting of LIBOR by the BBA and its members. The resultant rates are not reviewed by or subject to the approval of any regulatory agency, and therefore the integrity of LIBOR relies entirely upon the honesty of the Contributing Panel. The BBA has been quoted as saying it "calculates and produces BBA Libor at the request of [its] members for the good of the market."[26]

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[24] On February 9, 2009, Société Générale replaced Defendant HBOS on the BBA's USD-LIBOR panel. In February 2011, in response to concerns about possible LIBOR manipulation, the BBA added four more banks to the panel. On August 1, 2011, Defendant WestLB, at its request, was removed from the panel. As of December 2011, the USD-LIBOR panel consisted of 18 banks.

[25] BBA, *bbalibor Explained*, *The Basics*, *supra* note 20.

[26] *See* http://www.businessweek.com/news/2012-03-06/libor-links-deleted-as-bank-group-backsia way-from-tarnished-rate.

51. Every London business day, each member of the Contributor Panel indicates its borrowing costs for fifteen different maturities, or durations, ranging from one day to one year, and submits that information every London business day through electronic means to Thomson Reuters, the calculating agent for the BBA, by 11:10 a.m. London Time. Once each Contributor Panel bank has submitted its rates, the submitted rates are ranked. The highest and lowest quartiles are excluded from the calculation, and the middle two quartiles (i.e., 50% of the submissions) are averaged to formulate the resulting USD LIBOR "fix" or "setting."

52. The BBA published rules governing the way that Contributor Banks determined their submissions and Contributor Banks agreed to abide by those rules to remain on the LIBOR panel. The BBA's rules stated that Contributor Banks must provide rates for each tenor (*i.e.*, maturities) in response to the question: "At what rate could you borrow funds, were you to do so by asking for and then accepting inter-bank offers in a reasonable market size just prior to 11 am?"[27] The Panel Bank Defendants represented that they abided by the BBA's published rules and definitions and based their submissions on their cost of funds in the London interbank market. The published rules require each Contributor Bank to: (a) submit rates without reference to rates contributed by other Contributor Banks; (b) submit rates determined by the Contributor Bank's staff primarily responsible for management of that bank's cash, rather than its derivative trading book; (c) submit rates without reference to the pricing of any derivative financial instrument; and (d) submit rates that represent the rates it "would be offered funds."[28] The

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[27] BBA, *bbalibor Explained*, *The Basics*, *supra* note 20.

[28] Letter from Denis J. McInerney, Chief, Fraud Section, Criminal Division, United States Department of Justice, Appendix A (Dec. 18, 2012) ("UBS SOF") ¶ 7; BBA, *bbalibor Explained*, *The Basics*, *supra* note 20; BBA, *Technical Aspects*, *Setting bbalibor*,

BBA's rules stated that Contributor Banks were not to know the LIBOR rates submitted by other Contributor Banks during this submission window.[29] These rules require that the inputs to LIBOR be an honest reflection of competitive interbank interest rates.[30] As BBA Contributing Panel banks, Defendants had actual knowledge of these submission standards.

53. The USD LIBOR contribution of each Contributor Panel bank is submitted to between two and five decimal places, and the USD LIBOR fix is rounded, if necessary, to five decimal places. USD LIBOR rates and spreads are sometimes referenced in terms of "basis points," which mean one-hundredths of one percent. Thus, a +22 basis point spread between USD LIBOR and, for example, U.S. Treasuries, would mean that the USD LIBOR rate was 0.22% higher than the corresponding U.S. Treasury yield at the time of measurement.

54. Thomson Reuters calculates the data submitted by the Contributing Panel on behalf of the BBA, and publishes the resulting USD LIBOR rates each business day by approximately 11:30 a.m. London Time. The published rates are made available worldwide by Thomson Reuters and other data vendors through electronic means and through a variety of information sources, including *The Wall St. Journal*. In addition to the USD LIBOR fix resulting from the calculation, Thomson Reuters publishes the individual rate quotes submitted by each Contributor Panel bank.

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http://www.bbalibor.com/technicalaspects/setting-bbalibor (last visited Mar. 11, 2014); BBA, *bbalibor Explained*, *Definitions*, http://www.bbalibor.com/explained/definitions.

[29] BBA, *bbalibor Explained*, *The Basics*, *supra* note 20.

[30] Wheatley II, *supra* note 18, at 55. One of the key characteristics for a credible benchmark rate is that the benchmark should "clearly convey the economic realities of the underlying interest it seeks to measure to its users." Financial Benchmarks Consultation Report, the Board of the International Organization of Securities Commissions (Jan. 2013), 10, *available at* http://www.g20ys.org/upload/files/IOSCO_Financial_Benchmark_Progress_Report.pdf.

III. LIBOR GOVERNANCE

55. Through 2010, the Foreign Exchange and Money Markets ("FX & MM") Committee of the BBA had sole responsibility for all aspects of the functioning and development of LIBOR.[31] Thirteen "active market practitioners" comprised the FX & MM Committee.[32] The BBA does not disclose the names of the members of the FX & MM Committee,[33] but UBS and RBS have admitted that they had representatives on the FX & MM Committee.[34] On information and belief, other Panel Bank Defendants also served on the FX & MM Committee. The chair and two deputy chairs of the FX & MM Committee were representatives from Contributor Banks.[35] FX & MM Committee members met at least every two months at undisclosed locations to discuss LIBOR.[36] The FX & MM Committee did not publish official minutes.[37] According to its admissions to the United States Department of Justice ("DOJ"), UBS's representative on the FX & MM Committee in 2009 knew of fraudulent and collusive

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[31] *See, e.g.*, Landon Thomas Jr., *Trade Group for Bankers Regulates a Key Rate*, N.Y. Times, July 5, 2012, http://www.nytimes.com/2012/07/06/business/global/the-gentlemens-club-thatsets-libor-is-called-into-question.html?pagewanted=all; Fixing LIBOR: Some Preliminary Findings, Second Report of Session 2012-13, Vol. I, 5 (Aug. 18, 2012) ("Wheatley Report I"), *available at* http://www.parliament.uk/documents/commonscommittees/treasury/Fixing%20LIBOR_%20some%20preliminary%20findings%20-%20VOL%20I.pdf.

[32] BBA, *Understanding BBA LIBOR*.

[33] Enrich & Colchester, *Before Scandal, Clash over Control of Libor*, *supra* note 4.

[34] UBS SOF ¶ 85; Financial Services Authority, Final Notice to UBS AG ¶ 122 (Dec. 19, 2012) ("UBS Final Notice"); Financial Services Authority, Final Notice to the Royal Bank of Scotland ¶ 89 (Feb. 6, 2013) ("RBS Final Notice").

[35] BBA, *LIBOR Governance and Scrutiny*: *Proposals Agreed by the FX & MM Committee*, Appendix I, 12 ¶ 3 (Nov. 17, 2008), *available at* www.bbalibor.com/download/4025.

[36] Liam Vaughan, *Secret Libor Committee Clings to Anonymity Following Scandal*, Bloomberg, Aug. 21, 2012, http://www.bloomberg.com/news/2012-08-20/secret-libor-committee-clings-toanonymity-after-rigging-scandal.html.

[37] *Id.*

conduct relating to LIBOR and directed employees to "be careful" not to expose the wrongful conduct.[38]

56. The BBA employed a full-time manager to supervise day-to-day all aspects of LIBOR calculation and dissemination to the marketplace. The LIBOR manager was purportedly responsible for ensuring that all LIBOR processes operated to the highest standards. The LIBOR manager acted as secretariat to the FX & MM Committee and was responsible for informing the FX & MM Committee about issues pertaining to LIBOR.

57. On January 1, 2010, more than a year after learning that regulators were investigating LIBOR, the BBA modified its structure by creating a new entity, BBA LIBOR Ltd., to assume responsibility for the day-to-day running of the benchmark. The FX & MM Committee continued to oversee LIBOR. Despite this change in structure, the processes and procedures followed by Contributor Banks and the BBA in calculating and publishing LIBOR remained the same. On September 12, 2012, an independent panel recommended that the BBA be stripped of its role in LIBOR rate setting. Martin Wheatley, head of the United Kingdom's Financial Services Authority ("FSA"), noted at the time, "the BBA acts as the lobby organization for the same submitting banks that they nominally oversee, creating a conflict of interest that precludes strong and credible governance."[39] In February 2013, the BBA agreed to cede control of LIBOR to a new operator.

IV. DEFENDANTS' KNOWLEDGE OF LIBOR'S IMPORTANCE

58. Financial instruments that incorporated USD LIBOR were priced based on the understanding that free market forces, and not collusion, would determine the stream of income

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[38] UBS SOF ¶ ¶ 85-86.

[39] Wheatley II, *supra* note 18, at 21.

generated by those financial instruments. USD LIBOR, and expectations that it would be determined based on competitive market forces, cabined price negotiations for financial instruments that incorporated USD LIBOR. Market participants, including Plaintiffs, reasonably relied on Defendants' representations that LIBOR was, and would be, honestly set at competitive rates and that the Panel Bank Defendants submitted LIBOR rates that were accurate and consistent with the published LIBOR rules.

59. Indeed, the BBA acknowledged in 2008 that LIBOR "has always been relied on by the market as a reliable benchmark" of borrowing costs.[40] The BBA promoted LIBOR as a key benchmark rate:

> BBA LIBOR is by far the most widely referenced interest rate index in the world. Its importance goes beyond that of inter bank lending and touches everyone from large international conglomerates to small borrowers. It is central in interest rate swaps and the great majority of floating rate securities and loans relate to LIBOR. Independent research indicates that around $350 trillion of swaps and $10 trillion of loans are indexed to BBA LIBOR. It is the basis for settlement of interest rate contracts on the world's major futures and options exchanges. It is written into standard derivative and loan documentation such as the ISDA terms and is also used for an increasing range of retail products.[41]

60. Defendant Barclays has admitted that each Contributor Bank's LIBOR submissions contained market information concerning the costs of borrowing unsecured funds in particular currencies and tenors, the liquidity conditions and stress in the money markets, and Contributor

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[40] BBA, *Libor Gets Enhanced Governance and Scrutiny Procedures* (Dec. 18, 2008), http://www.bbalibor.com/%20news-releases/libor-gets-enhanced-governance-and-scrutinyprocedures.

[41] BBA, *Understanding the Construction and Operation of BBA LIBOR – Strengthening For The Future*, § 1.1, *supra* note 20.

Banks' ability to borrow funds in the particular markets.[42] Defendant Barclays further admitted that the market information conveyed by LIBOR submissions "affect[ed], or tend[ed] to affect, the prices of commodities in interstate commerce, including the daily rates at which BBA U.S. Dollar . . . LIBOR . . . [was] fixed" and the financial products that expressly incorporated LIBOR.[43]

61. Because a Contributor Bank's LIBOR submissions should correspond to the cost of money for that Contributor Bank, a Contributor Bank's LIBOR submission may be perceived as an indicator of a Contributor Bank's financial health and liquidity. For example, if a Contributor Bank's LIBOR submission is relatively high as compared to other Contributor Banks, that submission would suggest that Contributor Bank presents a credit risk and has potential liquidity problems.

FRAUDULENT AND COLLUSIVE CONDUCT RELATING TO LIBOR

I. PRE-CLASS PERIOD MANIPULATION

62. Prior to the Class Period, there is anecdotal evidence that Contributing Panel banks submitted false reports to BBA in order to benefit the derivatives traders at their respective banks. For example, Barclays has admitted that from June 2005 through September 2007, and periodically thereafter, its New York and London-based derivatives traders made requests for favorable USD LIBOR contributions to the Barclays' USD LIBOR submitters on the bank's London money markets desk, and that on numerous occasions, Barclays submitted USD LIBOR

[42] *See, e.g., In the Matter of: Barclays PLC, Barclays Bank PLC, and Barclays Capital, Inc.*, CFTC Docket No. 12-25, Order Instituting Proceedings Pursuant to Sections 6(c) and 6(d) of the Commodity Exchange Act, as Amended, Making Findings and Imposing Remedial Sanctions (June 27, 2012) ("Barclays CFTC Order"), at 26.

[43] *Id.*

quotes to the BBA that reflected its traders' requests rather than Barclays' interbank borrowing rates.

63. Unlike during the Class Period, the pre-Class Period manipulation was aimed at maximizing the traders' positions at specific points in time. For instance, on February 22, 2006, at approximately 9:42 a.m., a Barclays' derivatives trader sent an e-mail to a Barclays USD LIBOR submitter on its money market desk stating, "Hi (again) We're getting killed on our 3m resets, we need them to be up this week before we roll out of our positions. Consensus for 3m today is 4.78 - 4.7825, it would be amazing if we could go for 4.79...Really appreciate ur help mate." (ellipses in original). The Barclays' submitter responded, "Happy to help." Barclays's 3-month USD LIBOR submission on February 22, 2006 was 4.79%.

64. About a month later, on Friday, March 10, 2006, the same Barclays trader sent an e-mail to another Barclays USD LIBOR submitter stating: "Hi mate[.] We have an unbelievably large set on Monday (the IMM). We need a really low 3m [3-month USD LIBOR] fix, it could potentially cost a fortune. Would really appreciate any help, I'm being told by my NYK [counterparts in New York] that it's extremely important. Thanks." The following Monday morning, March 13, 2006, the trader wrote again: "The big day has[] arrived...My NYK were screaming at me about an unchanged 3m libor. As always, any help wd [would] be greatly appreciated. What do you think you'll go for 3m?" The Barclays' USD LIBOR submitter responded by email, "I am going 90 altho[ugh] 91 is what I should be posting." The trader replied: "[W]hen I retire and write a book about this business your name will be in golden letters," to which the Barclays' USD LIBOR submitter responded, "I would prefer this not be in any books!" As the trader requested, Barclays's 3-month USD LIBOR submission on March 13, 2006 was 4.90%.

65. On information and belief, similar misconduct occurred at other banks prior to the Class Period. The pre-Class Period misconduct exposed the willingness of Defendants to lie on USD LIBOR submissions, and their success and profits from these deceptive practices emboldened them to make the far more significant misrepresentations during the Class Period that injured Plaintiffs and the Class.

66. As discussed in more detail below, recent public disclosures reveal that certain derivatives traders employed by Defendants routinely asked their LIBOR submitters to provide false and dishonest LIBOR submissions to the BBA.[44] The LIBOR submitters for these Panel Bank Defendants agreed to accommodate, and did accommodate, the traders' requests for favorable LIBOR submissions on numerous occasions.[45]

67. Over a period of years, a culture of collusion developed that ultimately enabled the systematic LIBOR suppression discussed below.[46]

II. DEFENDANTS' CLASS PERIOD SYSTEMIC SUPPRESSION OF USD LIBOR

68. On Thursday, August 9, 2007, the Panel Bank Defendants submitted overnight USD LIBOR rates that were significantly higher than the prior day. Overnight USD LIBOR rose from 5.35% on August 8, 2007, to 5.86% on August 9, 2007, which put USD LIBOR at its highest level since 2001. Because these increases were not coincidental with changes in the rates charged by central banks, the media expressed concern that the increase in USD LIBOR

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[44] UBS SOF ¶ 20; Barclays SOF ¶ 11; *United States v. Royal Bank of Scotland plc*, Deferred Prosecution Agreement, Attachment A (Feb. 5, 2013) ("RBS SOF"), ¶ 14.

[45] Barclays SOF ¶ 11; UBS SOF ¶ 20; RBS SOF ¶ ¶ 14-15, 19.

[46] *See, e.g.*, Bloomberg, *Libor Gives Prosecutors Chance to Change Banking Culture*, Sept. 24, 2012, http://www.bloomberg.com/news/2012-09-24/libor-gives-prosecutors-chance-to-changebanking-culture.html.

indicated that the Panel Bank Defendants were afraid to lend to each other and that major losses for the Panel Bank Defendants and others were on the horizon.

69. On August 9, 2007, after the LIBOR submissions were published for that day, a UBS executive sent an internal email to a senior manager, a manager, and others stating that "it is highly advisable to err on the low side with fixings for the time being to protect our franchise in these sensitive markets. Fixing risk and [profit and loss] thereof is secondary priority for now."[47] UBS employees understood this secret directive to apply to all LIBOR currencies.[48]

70. By August 16, 2007, all of the Panel Bank Defendants made significantly lower USD LIBOR submissions than the prior week. UBS, for example, lowered its USD overnight LIBOR submission by 90 basis points. As discussed more fully below, the Defendants' LIBOR submissions showed significant dispersion in early August but then showed significant uniformity by the end of the month. This pattern corroborates allegations that the Defendants began colluding on USD LIBOR in August 2007.

71. During this same time period, the BBA issued a press release titled "Key Facts about LIBOR" in which the BBA falsely stated that LIBOR "closely reflects the real rates of interest being used by the world's big financial institutions" and that it "reflects the actual rate at which banks borrow money from each other."[49]

72. On August 20, 2007, RBS's London-based head of money markets trading and the person responsible for USD LIBOR submissions, Paul Walker, reportedly telephoned RBS's head of short-term markets for Asia, Scott Nygaard, in Tokyo, to discuss how banks were using

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[47] UBS SOF ¶ 105.

[48] UBS SOF ¶ 108.

[49] BBA, *Key Facts About BBA LIBOR* (Aug. 10, 2007).

LIBOR to profit on its movements rather than submitting rates that honestly reflected their perceived costs of borrowing. Mr. Walker is quoted as telling Mr. Nygaard: "People are setting to where it suits their book. . . . LIBOR is what you say it is."[50] Senior RBS managers reportedly knew, that at least as of August 2007, the Panel Bank Defendants were "systematically rigging LIBOR."[51]

73. Also in August 2007, senior managers at Barclays instructed their USD LIBOR submitters to lower their USD LIBOR submissions so that they would stay "within the pack" and be nearer to the suppressed rates of other Panel Bank Defendants rather than rates that were consistent with the BBA's definition of LIBOR.[52] In one internal Barclays email dated August 28, 2007, a Barclays employee noted that Lloyds's USD LIBOR submission was artificially low.[53] Similarly, in October 2007, a Barclays employee noted internally that an unidentified Contributor Bank submitted a LIBOR rate that was lower than the rate it actually paid.[54]

74. Barclays's directive to stay "within the pack" with other Panel Bank Defendants remained in place, and was repeated, through at least January 2009. Barclays has admitted that its USD LIBOR submissions were false because they were lower than Barclays would otherwise have submitted and contrary to the definition of LIBOR.[55]

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[50] Liam Vaughan & Gavin Finch, *Secret Libor Transcripts Expose Trader Rate-Manipulation*, Bloomberg, Dec. 13, 2012, http://www.bloomberg.com/news/print/2012-12-13/rigged-liborwith-police-nearby-shows-flaw-of-light-touch.html.

[51] *Id.*

[52] Letter from Denis J. McInerney, Chief, Criminal Division, Fraud Section, United States Department of Justice, Appendix A (June 26, 2012) ("Barclays SOF") ¶ 37.

[53] Email to Pat Leising (Aug. 28, 2007), BCI-H0000071-72.

[54] Email to Jason Miu (Oct. 3, 2007), BARC-MAY6000086-87.

[55] Barclays SOF ¶ 36.

75. On November 29, 2007, a Barclays manager contacted a representative of BBA to advise that USD "LIBORs are being set lower than where they ought to be" and informed the BBA that this issue applied to all of the Panel Bank Defendants.[56] The Barclays manager explained that the Panel Bank Defendants were submitting rates that were too low because "banks are afraid to stick their heads above the parapet and post higher numbers because of what happened to [Barclays] when [Barclays] did. You get shot at."[57] The Barclays manager specifically stated that certain other Panel Bank Defendants were submitting LIBOR rates lower than where those banks could actually get funds.[58]

76. On November 30, 2007, a private discussion occurred between an employee of Barclays and the FSA. An internal Barclays memorandum reveals that Barclays "didn't say anything along the lines of, you know, we're not posting where we think we should."[59] On December 4, 2007, a Barclays LIBOR submitter sent an internal email stating that the Panel Bank Defendants, including Barclays, were submitting false and dishonest submissions.[60]

77. On March 5, 2008, the FSA asked Barclays what it was paying for funding in certain tenors and currencies.[61] A Barclays manager stated internally that s/he did not want to disclose that Barclays was borrowing USD "way over LIBOR" and would rather indicate that it was paying a rate equal to LIBOR.[62] A Barclays LIBOR submitter agreed that if s/he responded with

[56] *Id.* ¶ 43.

[57] *Id.*

[58] *Id.*

[59] *Id.* ¶ 45.

[60] *Id.*

[61] *Id.* ¶ 46.

[62] *Id.*

"the honest truth" it might open a "can of worms."[63] Barclays responded to the FSA that it was paying for one-year USD at LIBOR "flat," which was untrue.[64]

78. On April 11, 2008, a Barclays employee told an employee of the New York Federal Reserve that he was aware of Panel Bank Defendants putting in USD LIBOR submissions that were lower than what they were actually paying and that "the ones that need the cash most put in the lowest, lowest rates."[65] The Barclays employee said that Barclays could not borrow money at the rates submitted by other Panel Bank Defendants and that "if we can't borrow money at that rate . . . [t]hen no one else could really. . . . I mean we, you-you know we speak to everyone that everyone else does so, um, yeah, it's a quite, quite an uncomfortable feeling and . . . I don't know if at some stage LIBORs will correct themselves."[66]

79. On May 6, 2008, an HBOS senior manager sent an e-mail to other HBOS personnel, including a senior manager overseeing the bank's Libor submitters, stating that "'in the current environment no bank can be seen as an outlier. The submissions of all banks are published and ***we could not afford to be significantly away from the pack***.'" Senior HBOS management directed the LIBOR submitter to suppress USD LIBOR submissions. For example, on September 26, 2008, after discussing the HBOS LIBOR submissions with more senior HBOS managers, the HBOS LIBOR Supervisor told the U.S. Dollar LIBOR Submitter that the U.S. Dollar LIBOR submissions should be lower relative to the other panel members and directed him

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63 *Id.*

64 *Id.* ¶ 46.

65 New York Federal Reserve Bank, Unofficial Transcript, ID09274211 (Apr. 11, 2008), at 7, *available at* http://www.newyorkfed.org/newsevents/news/markets/2012/libor/April_11_2008_transcript.pdf.

66 *Id*. at 16.

to reduce the spread between the HBOS U.S. Dollar LIBOR submissions and the submissions of the other panel members. That same day, the HBOS U.S. Dollar LIBOR Submitter, in a chat with an employee of another financial institution, stated, "you'll like this ***ive been pressured by senior management to bring my rates down*** into line with everyone else." Consistent with this directive from the HBOS LIBOR Supervisor, the HBOS U.S. Dollar LIBOR Submitter substantially ***reduced his three-month U.S. Dollar LIBOR submissions by 55 basis points*** on September 26, 2008.

80. According to UBS's admissions, an internal discussion took place among UBS employees in September 2008 that confirmed that the Panel Bank Defendants were continuing to make artificially low LIBOR submissions. In a documented discussion, a UBS employee stated, "LIBORs currently are even more fictitious than usual."[67] On October 10, 2008, a Barclays employee privately reported to the New York Federal Reserve Bank ("NY Fed") that Barclays's USD LIBOR submissions were "unrealistic."[68] An October 17, 2008 email from a Rabobank LIBOR submitter stated, "We are now setting all libors [sic] significantly under the market levels."[69] On October 24, 2008, another Barclays employee privately reported to the NY Fed that USD LIBOR rates were "absolute rubbish,"[70] citing submissions by WestLB and Deutsche Bank as being too low. The employee told the NY Fed that he was aware of banks that were making

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[67] UBS SOF ¶ 101.

[68] Unofficial Transcript of telephone call (Oct. 10, 2008), BARC-MAY6-000091-97, at 95, *available at* http://s3.documentcloud.org/documents/399152/new-york-fed-documents-onbarclays.pdf.

[69] *United States v. Coöperatieve Centrale Raiffeisen-Boerenleenbank, B.A.*, Deferred Prosecution Agreement, Attachment A (Oct. 29, 2013) ("Rabobank SOF"), ¶ 40.

[70] Transcript of telephone call (Oct. 24, 2008), BARC-MAY6-000098-100, at 000098, 000100, *available at* http://s3.documentcloud.org/documents/399152/new-york-fed-documents-onbarclays.pdf.

LIBOR submissions that were below what they actually paid in comparable transactions.[71] Publicly, however, Barclays and other Panel Bank Defendants continued to falsely represent that LIBOR was based on accurate and honest submissions.

III. STATISTICAL EVIDENCE OF DEFENDANTS' USD LIBOR SUPPRESSION

81. The evidence detailing Defendants' suppression of USD LIBOR resulting from Defendants' recent admissions (discussed more fully below) has facilitated numerous statistical analyses of LIBOR that could not have previously been conducted. Each analysis reaches the same conclusion: During the Class Period, there is a consistent gap between the actual behavior of USD LIBOR at the time, and what one would expect when comparing LIBOR to the behavior of other benchmark measurements. Because of Defendants' affirmative lies and concealment as well as the unprecedented turbulence created by the financial crisis, it was not clear at the time that this gap was the result of intentional fraudulent conduct by Defendants. At the time, Defendants were falsely assuring the public of the integrity of the LIBOR rate-setting process. But with the now-public revelations discussed below, these statistical anomalies confirm that USD LIBOR was being continually, intentionally, and artificially suppressed.

82. The statistical evidence also demonstrates that Defendants conspired to suppress LIBOR throughout the Class Period. For example, the Eurodollar study, performed by consulting experts retained by plaintiffs in the related class actions and discussed below, shows anomalous divergences during this period between the Eurodollar deposit rate benchmark, published by the Federal Reserve Bank of New York ("Fed Eurodollar Rate") and LIBOR submissions. Those divergences are unprecedented before and after this period and not

[71] *Id.* at 000100.

explainable by market fundamentals. Before and after this period, LIBOR and the Fed Eurodollar Rate were very closely correlated. During this period, however, Panel Bank Defendants' LIBOR submissions were, on average, approximately 26 basis points lower than the Fed Eurodollar Rate ("Eurodollar spread").

83. In addition, Panel Bank Defendants' patterns of divergence from the Fed Eurodollar Rate were very similar to each other during this period, as every panel bank had an average Eurodollar spread within 9 basis points of each other. That is, Panel Bank Defendants suppressed as a pack during this period. This statistical evidence shows collusion because all Panel Bank Defendants were artificially suppressing LIBOR in common but unpredictable ways that did not correspond to the LIBOR definition, or track market fundamentals, even though their submissions were supposed to be confidential.

84. Numerous sources of corroborating evidence confirm that Defendants did in fact manipulate USD LIBOR rates during the Class Period.

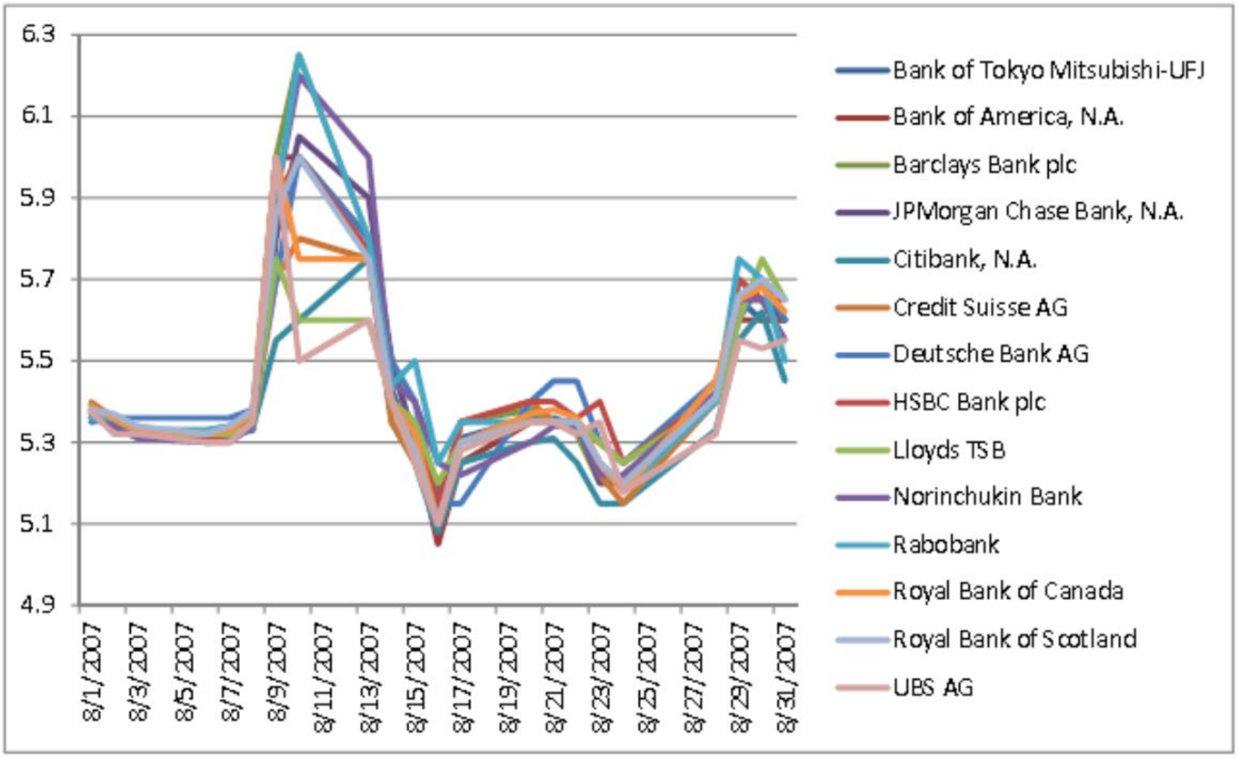
A. Evidence of the Commencement of the Manipulation

85. On August 9, 2007, various panel banks made LIBOR submissions that were substantially greater than the prior day, evoking media suspicion that panel banks were concerned about lending funds to one another.

86. By August 16, 2007, however, the panel banks were making substantially lower LIBOR submissions to the BBA. Figure A below shows that LIBOR submissions between August 7 and August 28, 2007 begin dispersed, but then conform to one another by month's end.

The pattern is consistent with other allegations that the collusion to suppress LIBOR began in August 2007.[72]

Figure A: LIBOR Submissions Between August 7 and August 28, 2007



B. Comparing LIBOR's Movements to the Fed Eurodollar Rate

87. Like LIBOR, Eurodollar deposit rates published by the Federal Reserve Bank of New York (as defined above, the "Fed Eurodollar Rate") reflect the cost at which Panel Bank Defendants and other banks lend dollars to one another in the London Interbank Market. The Federal Reserve's data are less susceptible to manipulation because they are based on anonymous polls of a larger sample of banks, and because unlike USD LIBOR, the Fed Eurodollar Rate is not commonly used as a benchmark in financial transactions. Thus, the

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[72] The information in this section A, including Figure A, are attributed to the Complaint filed in *FDIC as Receiver for Amcore Bank, N.A. et al. v. Bank of America Corporation, et al.*, 14-cv-1757 (S.D.N.Y. Mar. 14, 2014).

institutions surveyed for the purpose of determining Fed Eurodollar Rates have fewer financial or reputational incentives to falsify their reports, and a more limited ability to carry out and enforce a collusive scheme to manipulate Fed Eurodollar Rates. Comparing USD LIBOR to Fed Eurodollar Rates in the same tenor thus provides striking evidence confirming that Panel Bank Defendants collusively suppressed USD LIBOR during the Class Period.

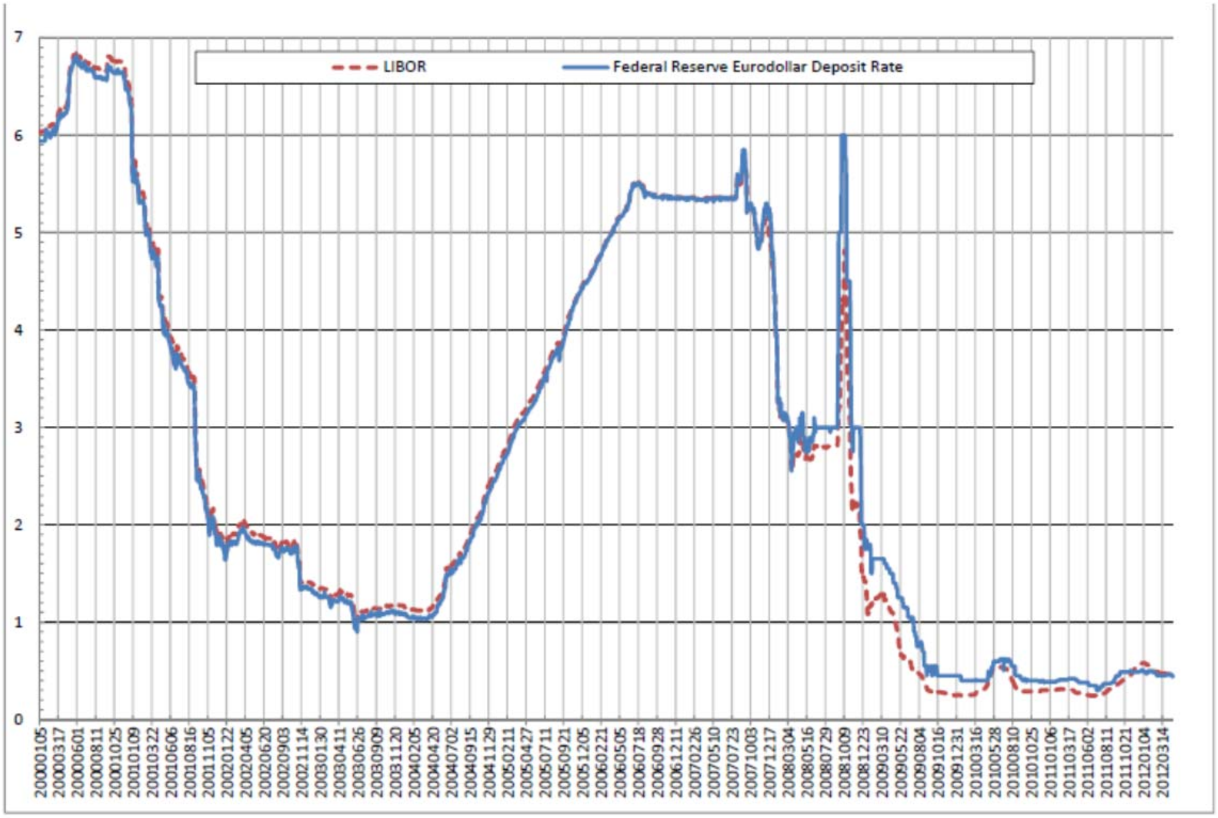
88. In particular, both USD LIBOR and the Fed Eurodollar Rate reflect the cost to banks of borrowing Eurodollar deposits. It would therefore be unusual for a bank to submit a USD LIBOR quote to the BBA that was substantially lower than its Fed Eurodollar Rate quote for the same day, since the two rates should reflect identical underlying factors that influence borrowing costs. To do so numerous times is so unusual as to strongly suggest manipulation and collusion among USD LIBOR panel banks. In other words, the spread between the two should be at or close to zero, and therefore a "negative spread"—*i.e.* where LIBOR is lower than the Fed Eurodollar Rate—strongly suggests manipulation and collusion.

89. As demonstrated in Figure B below,[73] USD LIBOR and the Fed Eurodollar Rate moved nearly in lockstep until the beginning of the 2007 financial crisis, and where they

[73] The information in this section B, including Figures B - G, are attributed to the Complaint filed in *City of Philadelphia et al. v. v. Bank of America Corporation, et al.*, 13-cv-06020

diverged, USD LIBOR typically exceeded the Fed Eurodollar Rate. Between August 2007 and the beginning of 2011, however, the Fed Eurodollar Rate consistently exceeded the USD LIBOR rate.[74]

Figure B: Movement of the 3-Month Fed Eurodollar Rate & 3-Month USD LIBOR Between 2000 and 2012

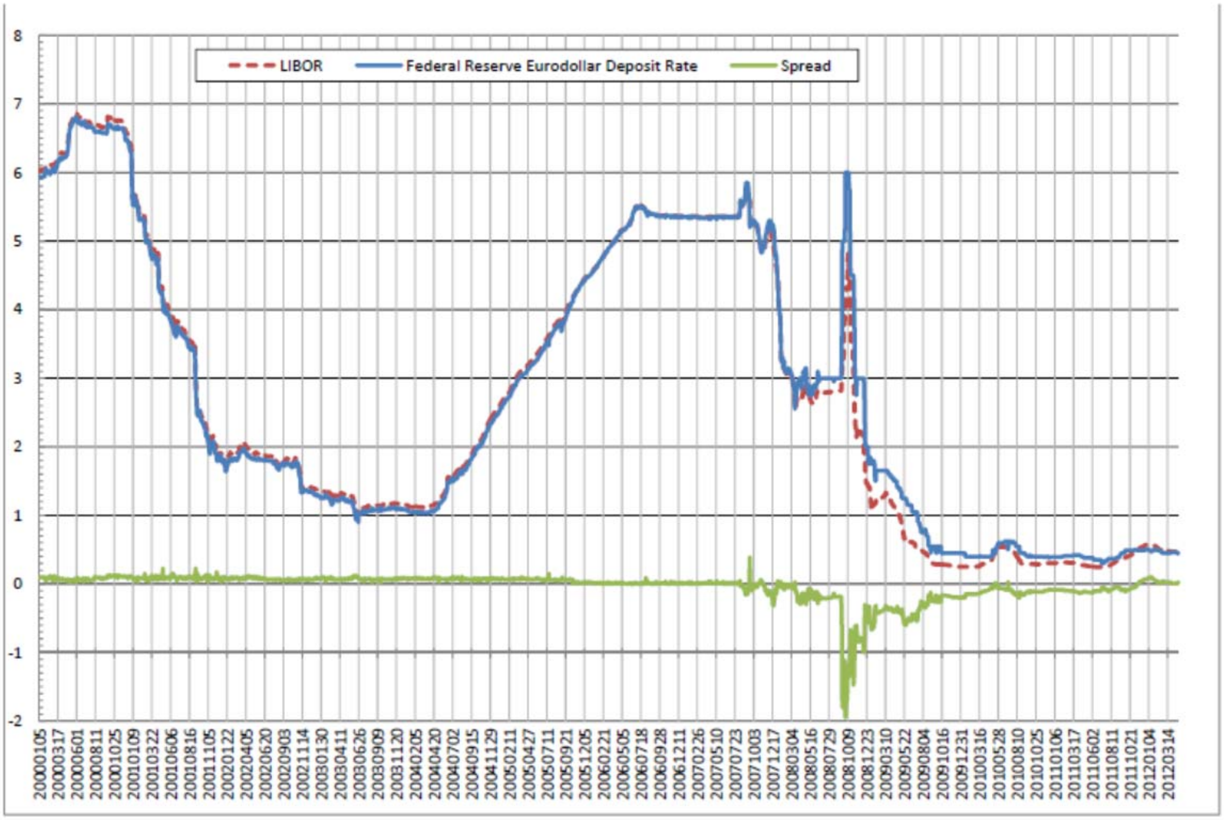


(S.D.N.Y. Oct. 06, 2014) and *Metzler Investment GmbH, et al v. Credit Suisse Group AG, et al.*, 11-cv-2613 (S.D.N.Y. Sept. 30, 2013).

[74] The divergence of USD Libor from Eurodollar deposit rates cannot be explained by financial distress, as the two rates remained closely aligned during previous periods of financial dislocation, such as those following the terrorist attacks of September 11, 2001.

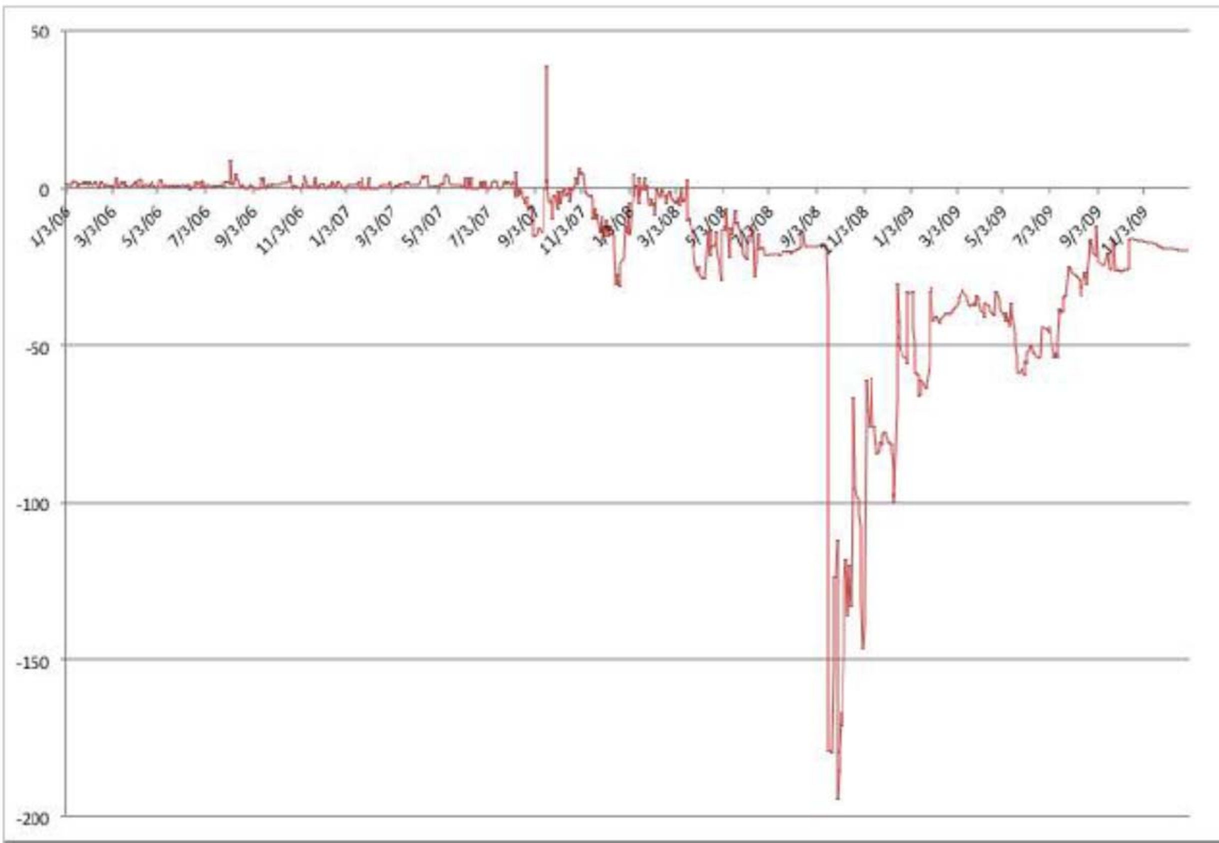
90. Similarly, Figure C shows the dramatic increase in the negative spread between the two rates beginning in August 2007.

Figure C: Spread Between the 3-Month Fed Eurodollar Rate & 3-Month USD LIBOR Between 2000 and 2012



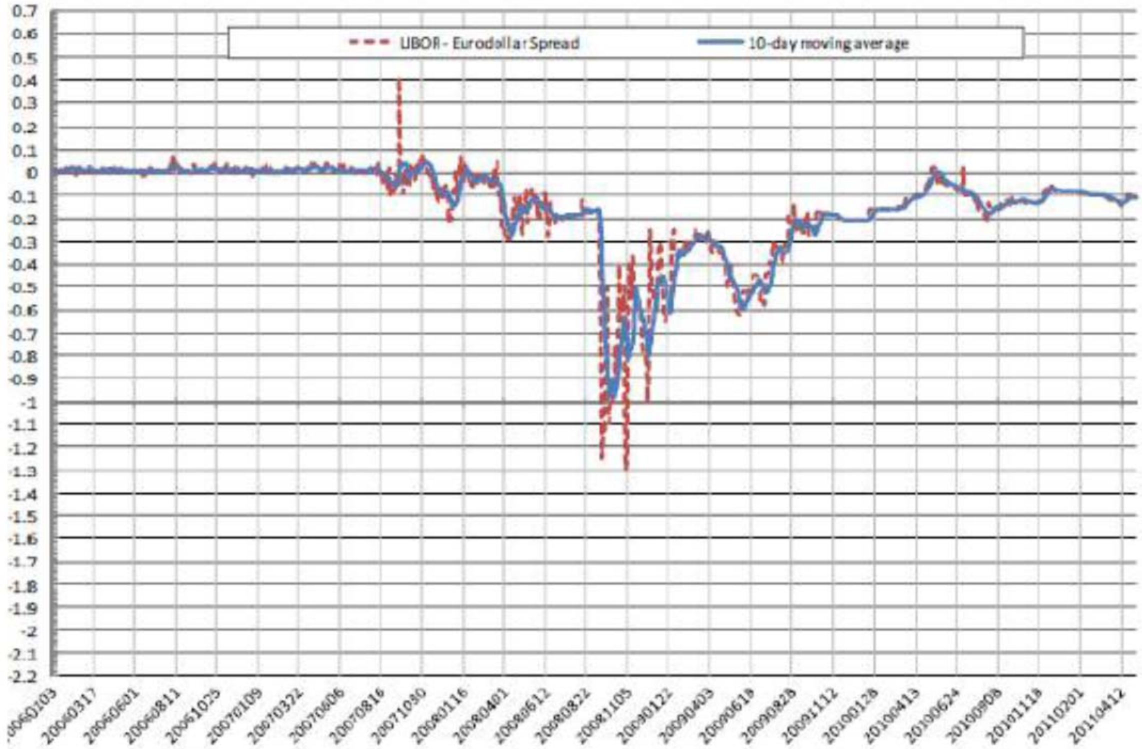
91. Figure D shows in closer detail the substantial spread between the Fed Eurodollar Rate and USD LIBOR between 2006 and 2009, including by an average margin exceeding 100 bps beginning on September 15, 2008, the day Lehman Brothers filed for bankruptcy, through the remainder of 2008.

Figure D: Spread Between 3-Month Fed Eurodollar Rate & 3-Month USD LIBOR



92. The divergence between three-month USD LIBOR and the comparable Fed Eurodollar Rate is also observable based on the submissions of each Panel Bank Defendant, as shown (for example) for Barclays in Figure E below.

Figure E: Spread (percentage points), 3-Month USD LIBOR Submissions of Barclays vs. 3-Month Fed Eurodollar Rate, January 3, 2006 through February 5, 2009



For additional charts depicting the spreads between the 3-Month Fed Eurodollar Rate & 3-month USD LIBOR submissions for the individual Panel Bank Defendants, see Appendix A, incorporated here by reference.

93. Figure F sets out this same data in number of basis points by panel bank, showing that the average spread for each Panel Bank Defendant was uniformly negative throughout the Class Period. Figure G demonstrates the dramatic increase in the spread during the two-week period following Lehman Brothers' collapse.

Figure F: Spread, 3-Month USD LIBOR Submissions vs. 3-Month Fed Eurodollar Rate August 8, 2007 through December 31, 2010

Panel Bank	**Average Spread Between August 8, 2007 and May 17, 2010**[75]
Bank of America	-30 basis points
Bank of Tokyo	-25 basis points
Barclays	-25 basis points
Citi	-32 basis points
Credit Suisse	-27 basis points
Deutsche Bank	-31 basis points
HBOS	-29 basis points
HSBC	-32 basis points
JPMorgan	-35 basis points
Lloyds	-30 basis points
Norinchukin	-25 basis points
Rabobank	-32 basis points
RBC	-28 basis points
RBS	-26 basis points
UBS	-29 basis points
WestLB	-35 basis points

[75] As the Exchange-Based Plaintiffs calculated, each calculated spread between August 8, 2007 and May 17, 2010 is "statistically significant at the extremely high 99% confidence level." [Corrected] Second Amended Consolidated Class Action Complaint at 50, *Metzler Investment GmbH v. Credit Suisse Grp. AG*, No. 11-cv-2613 (S.D.N.Y. filed Sept. 30, 2013).

Figure G: Spread, 3-Month USD LIBOR Submissions vs. 3-Month Fed Eurodollar Rate September 16, 2008 through September 30, 2008

Panel Bank	**Average Spread Between September 16, 2008 and September 30, 2008**
Bank of America	-144 basis points
Bank of Tokyo	-120 basis points
Barclays	-87 basis points
Citi	-142 basis points
Credit Suisse	-122 basis points
Deutsche Bank	-129 basis points
HBOS	-110 basis points
HSBC	-141 basis points
JPMorgan	-153 basis points
Lloyds	-146 basis points
Norinchukin	-126 basis points
Rabobank	-143 basis points
RBC	-140 basis points
RBS	-140 basis points
UBS	-141 basis points
WestLB	-138 basis points

94. Between January 3, 2006 and August 7, 2007, the spread between USD LIBOR and the Fed Eurodollar Rate was negative on just three trading days, and each time by a fraction of a basis point. By contrast, beginning in August 2007, USD LIBOR began to lag, resulting in a 16-basis-point spread by August 31, 2007. Between that date and September 15, 2008, the spread averaged 12 basis points, and was greater than 25 basis points on at least 18 trading days. Between September 15, 2008—when Lehman Brothers filed for bankruptcy—and September 30, 2008, the Fed Eurodollar Rate doubled from 3% to 6%, while USD LIBOR again lagged: by 32 basis points on September 16, 69 basis points on September 17, 180 basis points on September 18, and as much as 195 basis points on September 30, 2008. This evidence strongly suggests that

the panel banks colluded to suppress USD LIBOR, and particularly during a time when they sought to appear financially healthy.

95. Every spread during the period from September 16, 2008 to September 30, 2008 is statistically significant at the 99% confidence level. To put the magnitude of the suppression in perspective, the average 3-month Fed Eurodollar Rate between September 16 and September 30, 2008 was 4.81% (481 bps). Suppression by 139bps (Defendants' average spread over this period) would thus represent a ***more than 28.8% decrease*** in the rate itself.

96. The figures in these charts provide statistically significant evidence that the Panel Bank Defendants suppressed USD LIBOR throughout the Class Period. The figures show that Panel Bank Defendants falsified their USD LIBOR submissions consistently during the Class Period, and together underreported thousands of USD LIBOR submissions.

97. While the degree of USD LIBOR suppression is shocking, the uniformity of the spreads between LIBOR and the Fed Eurodollar Rate—during turbulent and unpredictable times in the markets—also demonstrate that the suppression of USD LIBOR was due to collusion and coordination among Defendants.

C. Comparing Defendants' Submissions of USD LIBOR to Other Currencies

98. The USD LIBOR panel banks also made submissions as members of LIBOR panels in many other currencies. Borrowing rates will vary across these currencies to reflect the risk of fluctuations in foreign-exchange rates and other costs specific to a given currency. A bank with comparatively low borrowing costs in one currency should not, however, experience comparatively high borrowing costs in another currency. That is, a bank with a given default risk should stand in a similar position relative to its peers no matter which currency is analyzed.

Accordingly, the consistent submission of relatively low USD rates alongside a relatively high submission in other currencies is evidence that the bank was strategically underreporting USD LIBOR.

99. Panel Bank Defendants' LIBOR submissions displayed suspicious "cross-currency risk reversals." For example, a study by Connan Snider and Thomas Youle found that Defendant JPMorgan submitted relatively high British Pound LIBOR reports during the Class Period even as it submitted relatively low USD LIBOR reports.[76] Defendants Deutsche Bank, Citi, and Barclays exhibited similar cross-currency discrepancies. The authors found the results highly anomalous because "most of the variables that [economists] would expect to be important for pricing debt either do not vary across banks or do not vary across currencies."

D. Comparing Panel Bank Defendants' Submissions to Movements in the Credit Default Swap Market

100. A credit default swap ("CDS") is an agreement whereby one party accepts periodic payments in exchange for a commitment to make a payment if a "credit event" occurs (such as a bankruptcy filing) in relation to the issuer of a particular debt security.

101. The price of this "insurance" (typically expressed in bps as "spreads") fluctuates with the perceived chances the credit event will occur. Similarly, in a competitive interbank lending market, the banks' borrowing costs should be related to their perceived credit risk. As one commentator observed, "The cost of bank default insurance has generally been positively correlated with LIBOR. That is, in times when banks were thought to be healthy, both the cost of bank insurance and LIBOR decreased or remained low, but when banks were thought to be in

[76] Connan Snider & Thomas Youle, *Does Libor Reflect Banks' Borrowing Costs?* Figure 2 (Working Paper, Apr. 2, 2010).

poor condition, both increased."[77] Thus, one would not expect to see banks with materially different "costs" of default insurance to report the same cost of borrowing.

102. During the Class Period, CDS spreads should have been an accurate predictor of LIBOR submissions. Because LIBOR is supposed to represent the interest rate at which panel banks can borrow in the Interbank Market, it (when accurately reported) contains both a risk-free rate component and a credit spread component that reflects the banks' creditworthiness. CDS, on the other hand, do not contain a risk-free component. As noted above, they are contracts that pay when a credit event occurs, and thus provide a direct market rate for the credit risk of the reference entity. Because the risk-free rate was extremely (and consistently) low during the Class Period, USD LIBOR should have almost exclusively reflected the panel banks' credit risk. The CDS spread and USD LIBOR submission of a panel bank, then, should have closely tracked one another.

103. Yet during the Class Period, Panel Bank Defendants' USD LIBOR submissions were unnaturally clustered together despite wide variation in their CDS spreads. The discrepancy between the panel banks' USD LIBOR submissions and CDS spreads was described in a May 29, 2008 article in the *Wall Street Journal*. According to the *Wall Street Journal*'s analysis, numerous panel banks caused USD LIBOR, "which is supposed to reflect the average rate at which banks lend to each other," to "act as if the banking system was doing better than it was at critical junctures in the financial crisis."[78] The article further found that "reported LIBOR rates fail[ed] to reflect rising default-insurance costs." Because CDS spreads were set by the market,

[77] Justin Wong, *LIBOR Left in Limbo: A Call for More Reform*, 13 North Carolina Banking Institute 365, 371 (2009).

[78] *See* Carrick Mollenkamp & Mark Whitehouse, *Study Casts Doubt on Key Rate*, Wall Street Journal (May 29, 2008).

thus providing an accurate measure of the panel banks' credit risk, discrepancies between CDS spreads and USD LIBOR submissions provide evidence of USD LIBOR suppression.

104. The *Wall Street Journal* observed that the widest gaps existed with respect to the USD LIBOR submissions of a group of panel banks that included Defendants Citi, WestLB, HBOS, JPMorgan, and UBS. On average, Citi submitted 3-month USD LIBOR quotes that were 87 basis points below their borrowing rates as calculated using CDS data. For HBOS, the gap was 57 basis points, for JPMorgan the gap was 43 basis points, and for UBS 42.[79] Defendants Credit Suisse, Deutsche Bank, Barclays, and RBS each exhibited discrepancies of about 30 basis points. Notably, the *Journal* also reported that, in mid-April 2008, UBS was offering to pay 2.85% to borrow US dollars for three months, but on April 16, 2008 reported it could borrow at 2.73%—which was similar to reports from the other panel banks.[80]

105. Also anomalous is that during the Class Period, CDS data frequently indicated that a given panel bank was riskier than its peers, while the bank's USD LIBOR submissions suggested the opposite. For example, there were many instances in which a bank's CDS spread was higher than the median of its peers, while its 3-month USD LIBOR quote was lower. This was true for about 30% of UBS's submissions, just under 30% of JPMorgan and RBS's submissions, and 20% of Deutsche Bank and Barclays' submissions.

106. The *Wall Street Journal* further noted the uncanny equivalence between the panel banks' USD LIBOR submissions: their 3-month USD LIBOR quotes fell within a range of only 6 bps, even though at the time their CDS spreads varied far more widely, reflecting the market's differing views as to the banks' creditworthiness. David Juran, a statistics professor at Columbia

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[79] *Id.*

[80] *Id.*

University who reviewed the *Wall Street Journal*'s methodology, concluded its calculations demonstrate "very convincingly" that reported USD LIBOR is lower, to a statistically significant degree, than what the market thinks it should be.[81]

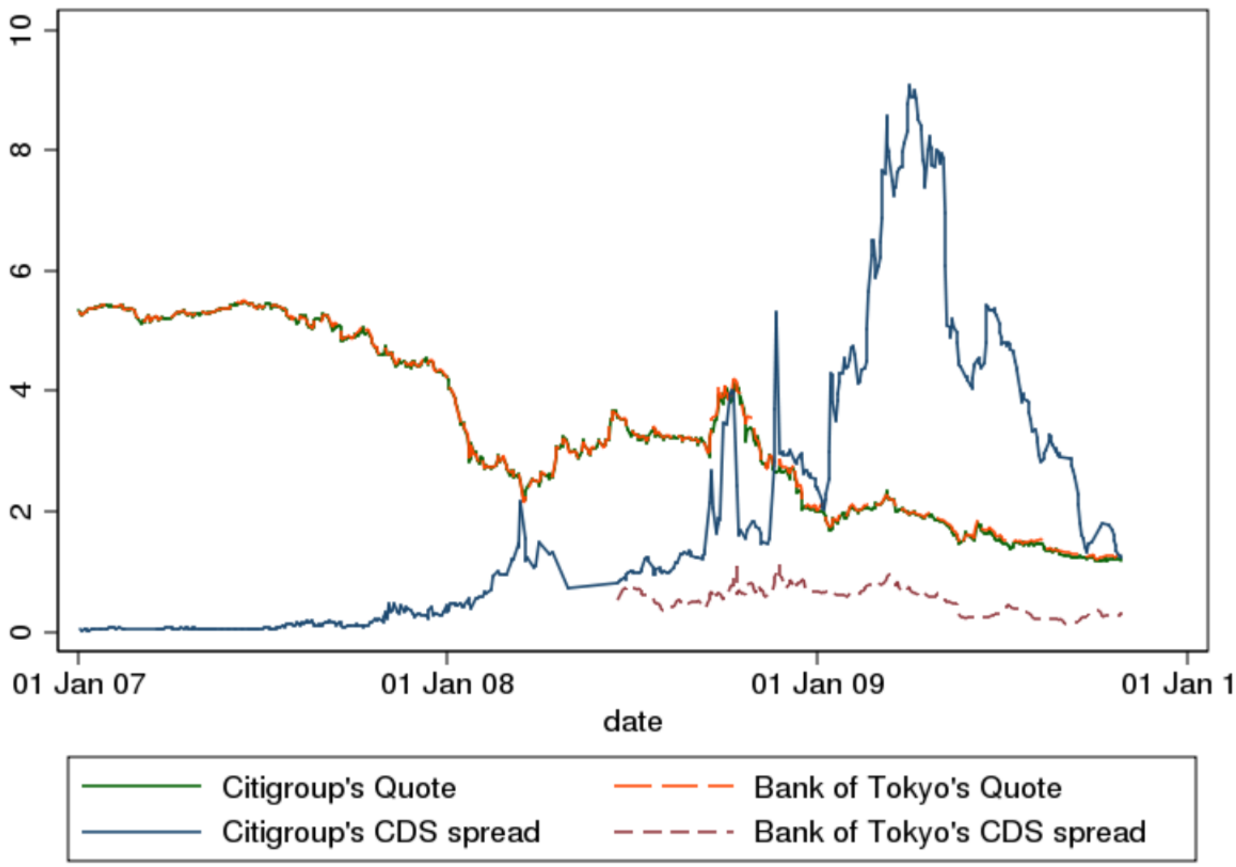
107. Calculating an alternate borrowing rate incorporating CDS spreads, the *Wall Street Journal* estimated that misreporting of USD LIBOR had a $45 billion effect on the market over just a four-month period, these losses falling on investors receiving USD LIBOR-based payments, such as Plaintiffs.

108. Further academic studies support the *Wall Street Journal*'s analysis. The Snider and Youle study, cited above, concluded LIBOR did not accurately reflect average bank borrowing costs, its "ostensible target." Noting that "[i]n a competitive interbank lending market, banks' borrowing costs should be significantly related to their perceived credit risk," Snider and Youle posited that if USD LIBOR quotes "express true, competitively determined borrowing costs," they should "be related to measures of credit risks, such as the cost of default insurance." According to Snider and Youle, however, quotes provided by panel banks in fact deviated from their costs of borrowing as reflected in CDS spreads.

109. For example, Snider and Youle observed that Citi exhibited substantially higher CDS spreads than Bank of Tokyo during the crisis, suggesting that the market perceived Citi as much riskier. Yet its USD LIBOR submissions tell the opposite story, as they were slightly lower than Bank of Tokyo's submissions. This is shown in Figure H below:

[81] *Id*.

Figure H: Citi and Bank of Tokyo's One-Year USD LIBOR Quotes and CDS Spreads



110. Evidence from the CDS market also reveals a second anomaly. As Snider and Youle explained: "Given that purchasing credit protection for a loan makes the loan risk free, one would expect [the] difference between the loan rate and the CDS spread to roughly equal the risk free rate. This corresponds to the idea that a loan's interest rate contains a credit premium, here measured by the CDS spread." For example, if a bank were to make a loan at an interest rate of 5% and then spend 3% on credit protection, the net rate of return on the loan becomes 2%. With the credit protection, that 2% difference is risk free, and should approximate the risk free rate of return prevailing in the market.

111. As the authors observed, however, Citi's USD LIBOR submissions were often "significantly below its CDS spread." This implied that "there were interbank lenders willing to lend to Citi at rates which, after purchasing credit protection, would earn them *a guaranteed 5 percent loss*." (Emphasis added). In other words, the credit *premium*, which of course should only constitute a portion of the loan's interest rate, was *5% larger* than the purported interest rate itself—*i.e.*, Citi's USD LIBOR quote. This discrepancy contravenes basic rules of economics, indicating that Citi was underreporting its borrowing costs to the BBA.

112. A 2012 analysis published in the *Journal of Banking & Finance* similarly found that the USD LIBOR submissions of Bank of America, Citi, Lloyds, Rabobank, JPMorgan, Deutsche Bank, and UBS consistently reported below-median borrowing costs in April-May 2008 despite exhibiting relatively high CDS spreads.[82] The *Wall Street Journal* concluded in 2012 that "banks' submissions used to calculate the London interbank offered rate . . . sometimes fail to track the market's view of the credit risk posed by each firm."[83]

E. Additional Expert Analysis Performed in Connection with the Class Action Proceedings Shows a Sudden Increase in USD LIBOR After Expressions About Its Integrity

113. On April 17, 2008, the day after *The Wall Street Journal* initially reported on LIBOR's anomalous behavior and the BBA stated it would conduct an inquiry concerning

[82] Rosa M. Abrantes-Metz et al., *Libor Manipulation?*, 36 J. Banking & Fin. 136, 148 tbl.7 (2012).

[83] Jean Eaglesham, Rob Barry & Tom McGinty, *Libor Furor: Key Rate Gets New Scrutiny*, Wall Street Journal (Sept. 12, 2012); *see also* Jennie Bai & Pierre Collin-Dufresne, *The CDS-Bond Basis During the Financial Crisis of 2007-2009* (Working Paper Apr. 30, 2012); Alessandro Fontana, *The Persistent Negative CDS-Bond Basis During the 2007/08 Financial Crisis* (Working Paper 2009).

LIBOR, there was a sudden jump in USD LIBOR—the three-month borrowing rate hit 2.8175% that day, about eight basis points more than the previous day's rate of 2.735%.

114. Suspiciously, reported LIBOR rates for other currencies fell or remained relatively flat at the time USD LIBOR rose, a sign that the latter was susceptible to manipulation.

115. A consulting expert engaged by class-action plaintiffs analyzed the change in USD LIBOR on April 17, 2008—the day after a *Wall Street Journal* article reported on certain unexpected aspects of USD LIBOR's behavior, and the BBA announced an inquiry into LIBOR. The expert's hypothesis was that, if the panel banks were not manipulating LIBOR, any change to the benchmark on April 17, 2008 should be similar to typical changes seen between January 5, 2000 and May 13, 2011. But, if the banks were manipulating LIBOR, and responded to the *Journal* article, they would be likely to substantially reduce their manipulation immediately thereafter to avoid further reporting and convince the market that LIBOR was reliable. That reduction in manipulation would lead to a corresponding increase in the panel banks' LIBOR submissions.

116. The expert's analysis concluded that USD LIBOR increased in a statistically significant way on April 17, 2008, and that increases in 11 of the 16 panel banks' submissions were likewise statistically significant. The table below illustrates these changes:

	Dependent variable	Average change during non-suppression days	Change in the dependent variable on April 17, 2008 relative to non-suppression days' average	Statistical Significance at the 1-5% level of the April 17, 2008 move
1	BBA LIBOR	-0.000371	0.0909*	5%
2	HSBC LIBOR	0.000154	0.1273**	1%
3	JPMC LIBOR	-0.000333	0.0872*	5%
4	BARCLAYS LIBOR	-0.000333	0.1072*	5%
5	WEST LB LIBOR	-0.000314	0.0971*	5%
6	RBS LIBOR	-0.000352	0.0921*	5%
7	RABOBANK LIBOR	-0.000364	0.0872*	5%
8	CITI LIBOR	-0.000344	0.1022*	5%
9	RBC LIBOR	0.002067	0.1021*	5%
10	UBS LIBOR	-0.000777	0.1021*	5%
11	NORIN LIBOR	-0.00038	0.0971*	5%
12	HBOS LIBOR	0.002467	0.1111*	5%
Statistical significance is assessed using a AR(3) model for the residuals				
* While not shown here, an additional dummy variable is used to control for changes during the Class Period of August 8, 2007 to May 17, 2010.				

117. The expert also tested the hypothesis that other market events could have caused the increase in LIBOR, but that such events should have moved the Fed Eurodollar Rate, and therefore the spread between the two benchmarks should remain the same. If the increase were a reaction solely to the *Wall Street Journal* report and BBA announcement, however, only LIBOR should be affected.

118. Once again, the expert's analysis found that the spread between USD LIBOR and the Fed Eurodollar Rate increased for 11 out of 16 panel banks, and also in the overall USD LIBOR rate at statistically significant levels. The table below illustrates these changes:

Changes in Spread (BBA LIBOR – Federal Reserve's Eurodollar Deposit Rate) on April 17, 2008 in Percentage Points*				
	Dependent variable	**Average change in Spread during non-suppression days**	**Change in the dependent variable on April 17, 2008 relative to non-suppression days' average**	**Statistical Significance at the 1-5% level of the April 17, 2008 move**
1	BBA LIBOR Spread	-0.000078	0.0838	5%
2	HSBC LIBOR Spread	0.000508	0.1205	1%
3	JPMC LIBOR Spread	-0.000103	0.0803*	5%
4	BARCLAYS LIBOR Spread	-0.000067	0.1002**	1%
5	RBS LIBOR Spread	-0.0001	0.0851*	5%
6	TOKYO LIBOR Spread	-0.000092	0.0797*	5%
7	CITI LIBOR Spread	-0.00012	0.0953*	5%
8	CS LIBOR Spread	-0.000224	0.07*	5%
9	RBC LIBOR Spread	-0.000135	0.0951*	5%
10	UBS LIBOR Spread	-0.000172	0.095*	5%
11	NORIN LIBOR Spread	-0.000179	0.0903**	1%
12	HBOS LIBOR Spread	0	0.1007*	5%
Statistical significance is assessed using a AR(3) model for the residuals				
* While not shown here, an additional dummy variable is used to control for changes during the Class Period of August 8, 2007 to May 17, 2010.				

F. Evidence From Comparing USD LIBOR's Movements to Those in Other Measurements of the Banks' Likelihood of Default

119. The consulting experts for other plaintiffs in the multidistrict LIBOR litigation using a proprietary database provided by Kamakura Risk Information Services ("KRIS")

conducted another study concluding that the USD LIBOR submissions were being moved by factors other than the panel banks' borrowing costs.

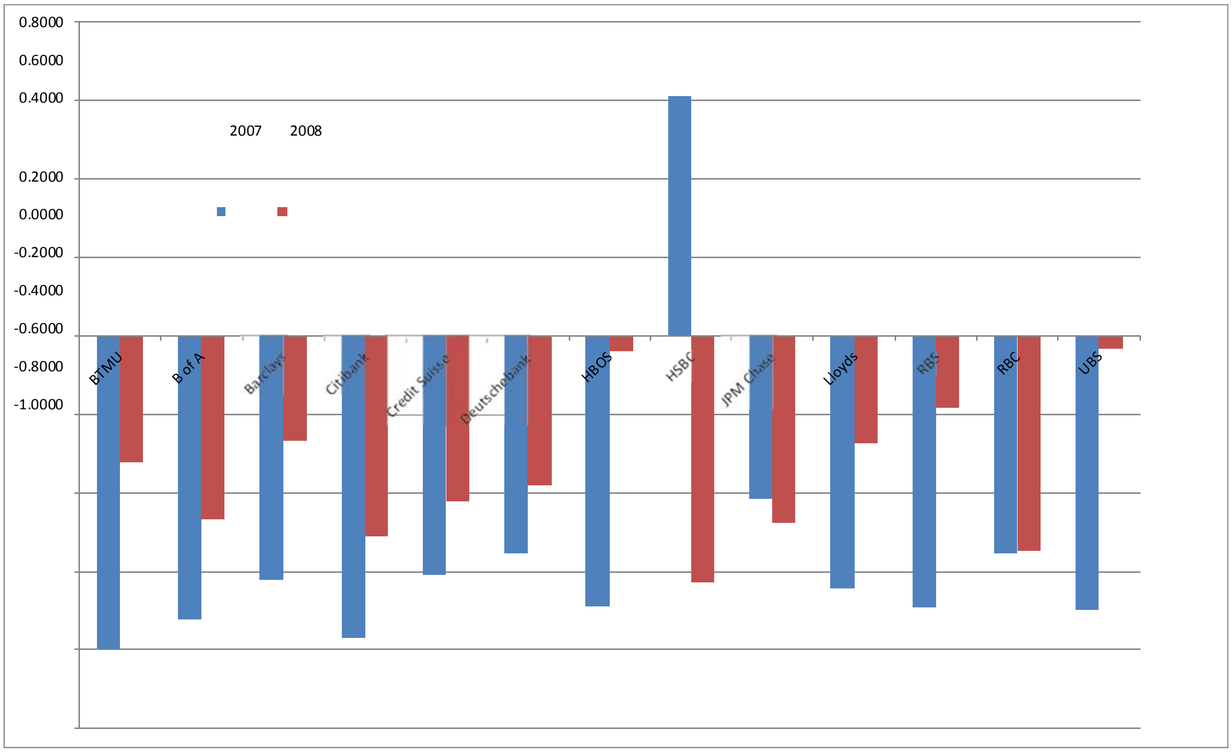
120. The KRIS data estimates each panel bank's default risk on a daily basis by applying multiple models to each bank's equity and bond prices, accounting information, the level of interest rates and other objective and observable indicators. The KRIS data measures the probability of default of a borrower.

121. It is a fundamental tenet of finance theory that a bank's borrowing costs should correlate positively with its perceived probability of default. That bank's objectively measured riskiness, and its LIBOR submissions, should have increased in parallel during 2008, reflecting its expectation that, as a riskier institution, it would have to pay more to borrow funds in the London Interbank Market. But the KRIS analysis found a negative correlation—that is, as the perceived risk increased, the purported borrowing cost, meaning USD LIBOR, actually declined. Such a statistically significant negative correlation between a bank's USD LIBOR submission and its probability of default is consistent with, and strongly suggests, that the bank is manipulating its USD LIBOR submission to paint an unwarranted picture of financial health. Figures I and J show the almost universally negative correlation coefficient for one-month USD LIBOR and one-month default probabilities, and three-month USD LIBOR and three-month default probabilities, respectively, across various Panel Bank Defendants for both 2007 and 2008; and Figures K and L show again that, almost without exception, there were negative correlation coefficients across all tenors of USD LIBOR for the indicated time periods.

Figure I: Correlation Coefficient Between 1-Month USD LIBOR Submissions and 1-Month Probability of Default

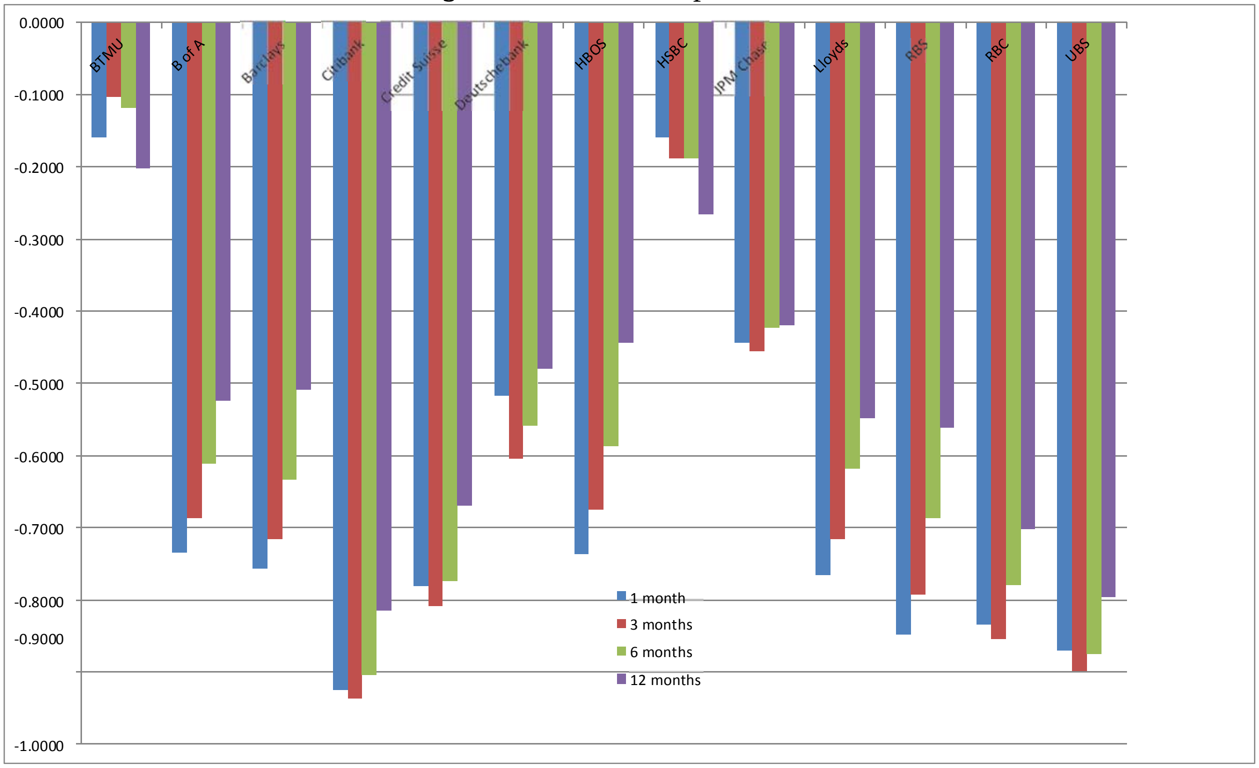
(Note: PDs are estimated daily using the reduced form model of Kamakura Risk Information Services.)

Figure J: Correlation Coefficient Between 3-Month USD LIBOR Submissions and 3-Month Probability of Default



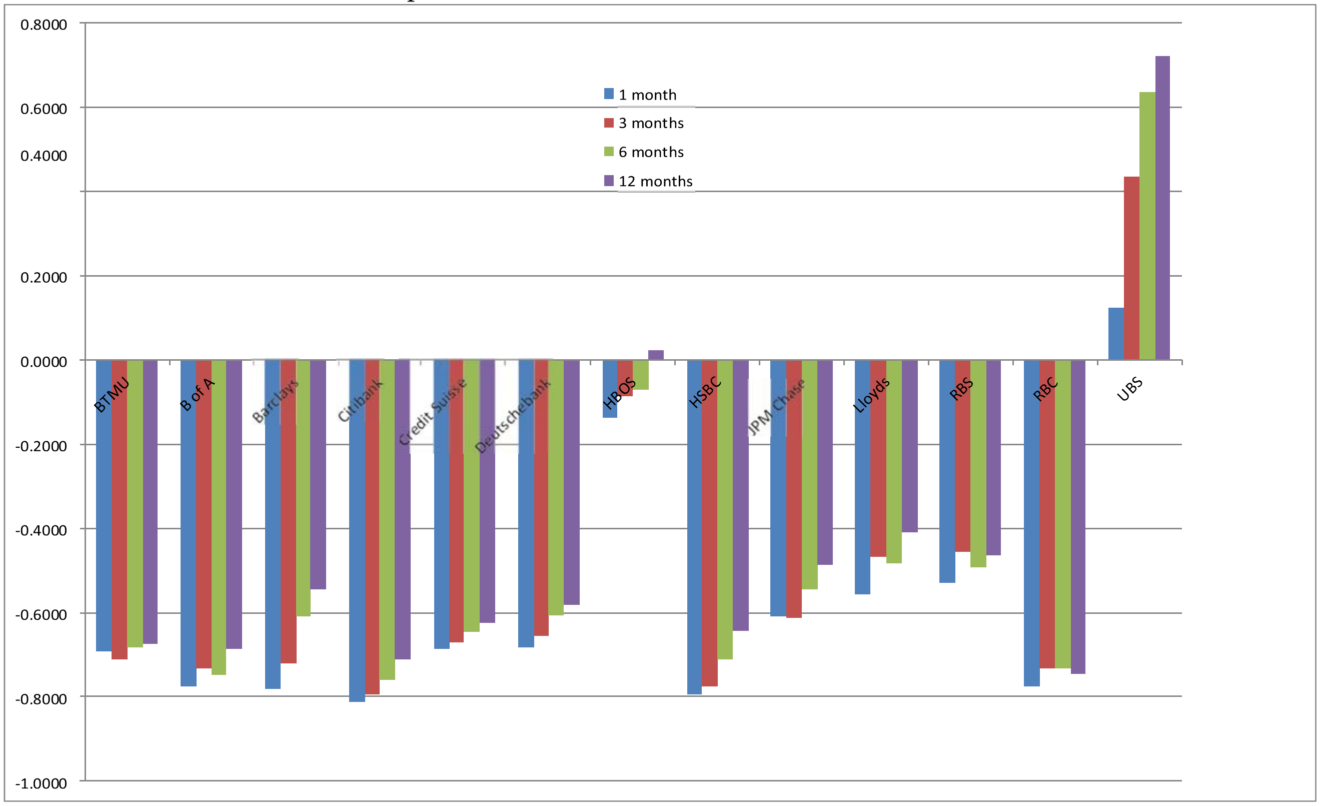
(Note: PDs are estimated daily using the reduced form model of Kamakura Risk Information Services.)

Figure K: Correlation Coefficient Across All Tenors
Between August 9, 2007 and September 12, 2008



(Note: PDs are estimated daily using the reduced form model of Kamakura Risk Information Services.)

Figure L: Correlation Coefficient Across All Tenors
Between September 15, 2008 and December 31, 2008



(Note: PDs are estimated daily using the reduced form model of Kamakura Risk Information Services.)

G. Evidence From Comparing USD LIBOR's Movements to Those in the Federal Reserve's Term Auction Facility

122. USD LIBOR suppression is also apparent in the discrepancy between Panel Bank Defendants' USD LIBOR submissions and the rates at which banks were borrowing from the Federal Reserve's Term Auction Facility.

123. From late 2007 to mid 2010, the Federal Reserve conducted periodic auctions in which it made secured loans. The facility extended only loans secured by acceptable collateral, which carried lower risk than the unsecured interbank borrowings measured by USD LIBOR. Thus, the banks should not have been willing to put in a bid (which required the posting of collateral) at a higher rate than its purported unsecured interbank lending rate.

124. However, Panel Bank Defendants were submitting auction bids substantially above their purported USD LIBOR borrowing rates.[84] For example, two days before publication of the *Journal* article, the 28-day rate for the Fed facility was 3.75%—well above USD LIBOR's 3.18% for that day, and its 3.21% rate the following day.[85]

H. Evidence From the Stability and Bunching of the USD LIBOR Submissions

125. According the BBA's rules, as discussed above, the panel banks were not supposed to know each other's daily submissions. Thus, consistent clustering of the panel banks' submissions would support a conclusion of manipulation and conspiratorial behavior.

126. A group of banks seeking to manipulate LIBOR would want to submit the lowest bids possible, without drawing attention to themselves by being outliers. By making low submissions that were among the lowest but not so low as to be excluded as being in the lowest quartile, the banks could place maximum downward pressure on LIBOR while at the same time deflecting potential suspicion from being too low. As a Rabobank trader explained: "Rabo JPY LIBOR numbers are already one of the lowest four banks among 16 panel banks so even if we put them lower further, it wouldn't change on yen Libors . . . and i think just keep libors one of the lowest four banks is the good idea because it isnt so obvious that ppl wouldnt notice. if it is too obvious, ppl could start looking at us manipulating libors." Consistent with this explanation, any clustering of submissions around the fourth-lowest bid would indicate that banks were acting together to drive the USD LIBOR rate downward.

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[84] Carrick Mollenkamp, *Libor's Accuracy Becomes Issue Again*, Wall Street Journal (Sept. 24, 2008).

[85] *Id.*

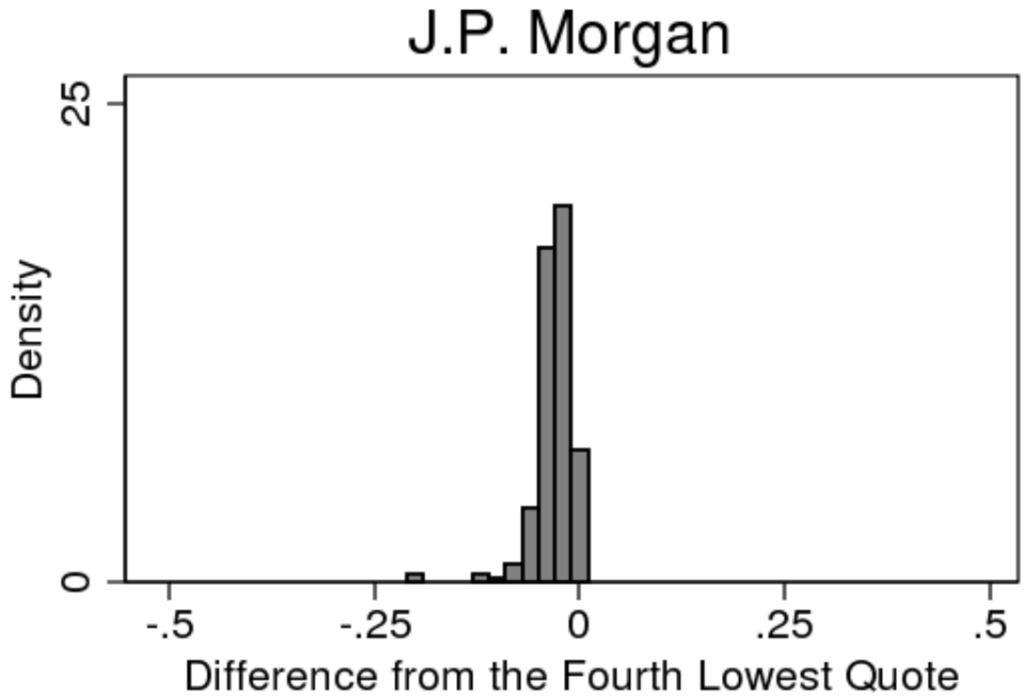
127. During the Class Period, the rates reported by certain Defendants—in particular, Citi, Bank of America, and JPMorgan—also demonstrated suspicious "bunching" around the fourth lowest quote submitted by the 16 banks to the BBA. Indeed, Citi's and Bank of America's quotes often tended to be identical to the fourth-lowest quote for the day. Because the USD LIBOR calculation involved excluding the lowest (and highest) four reported rates every day, bunching around the fourth-lowest rate suggests Defendants collectively depressed USD LIBOR by reporting the lowest possible rates that would not be excluded from the calculation of USD LIBOR on a given day.

128. Bunching among Defendants' respective USD LIBOR quotes indicates the banks intended to report the same or similar rates, notwithstanding the banks' differing financial conditions, which, as detailed above, reasonably should have resulted in differing USD LIBOR quotes. Those discrepancies suggest Defendants colluded to suppress USD LIBOR.

129. The following charts show the frequency with which the USD LIBOR quotes submitted by Defendants Citi, Bank of America, and JPMorgan fell within a given percentage rate from the fourth-lowest quote. A negative difference means the reporting bank was below the fourth-lowest quote, and therefore its rate was not included in the daily LIBOR calculation, while zero difference means that the bank reported the fourth-lowest quote on a given day (either by itself or tied with other reporting banks).[86]

[86] In the event of a tie between two or more banks, one of the banks' quotes, selected at random, was discarded.

Figure M



130. Citi and Bank of America also bunched their submissions in this manner, frequently submitting USD LIBOR quotes that were ***identical*** to the fourth-lowest submission.

Figure N

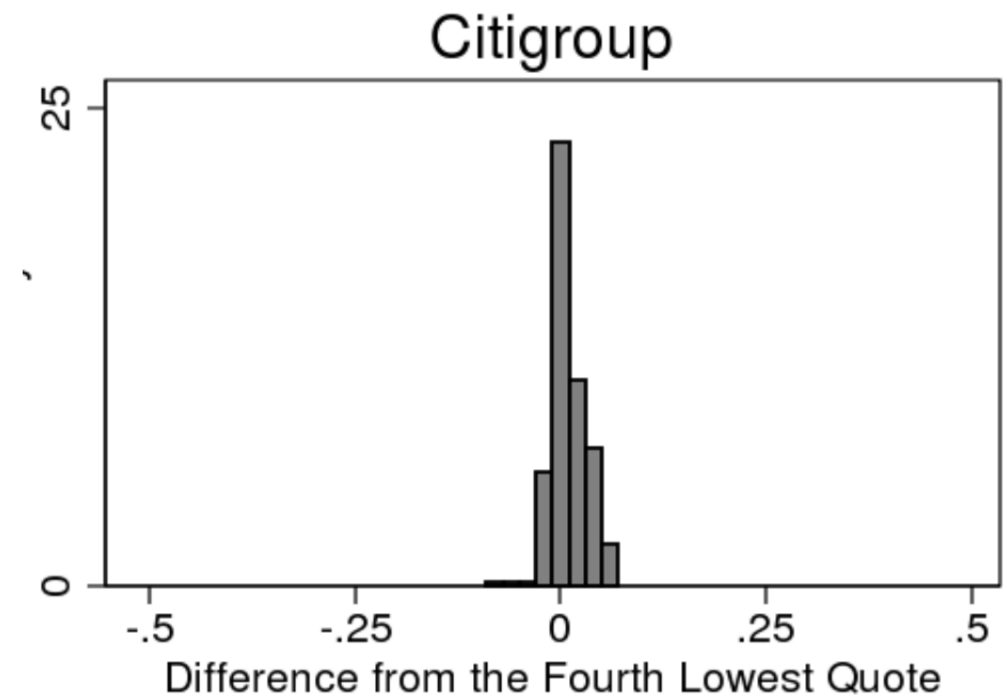
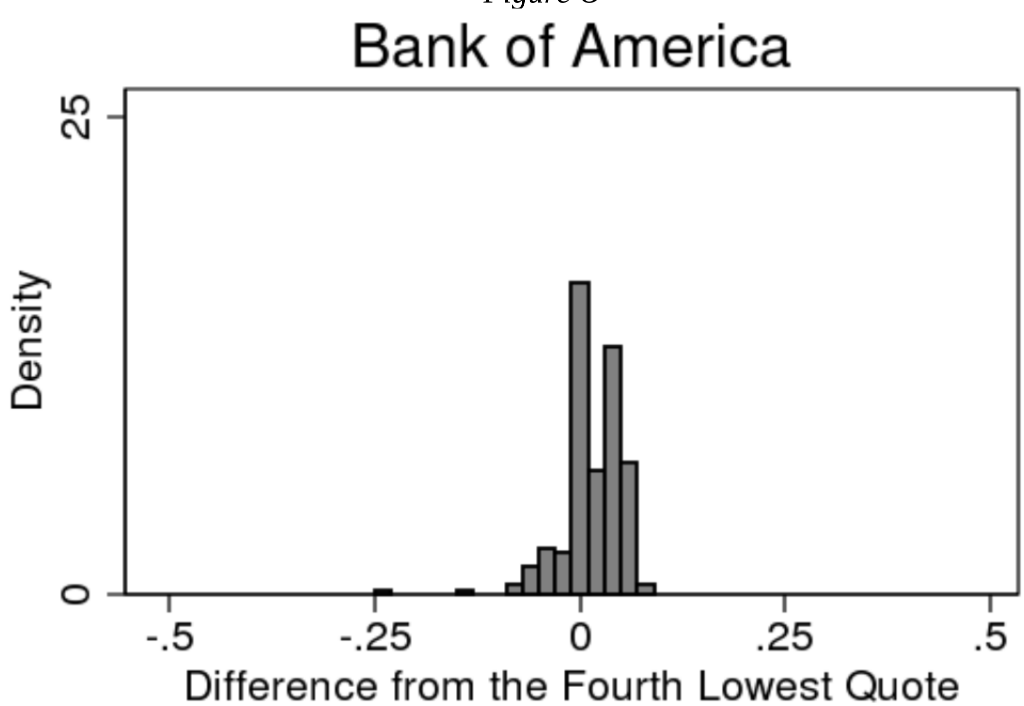
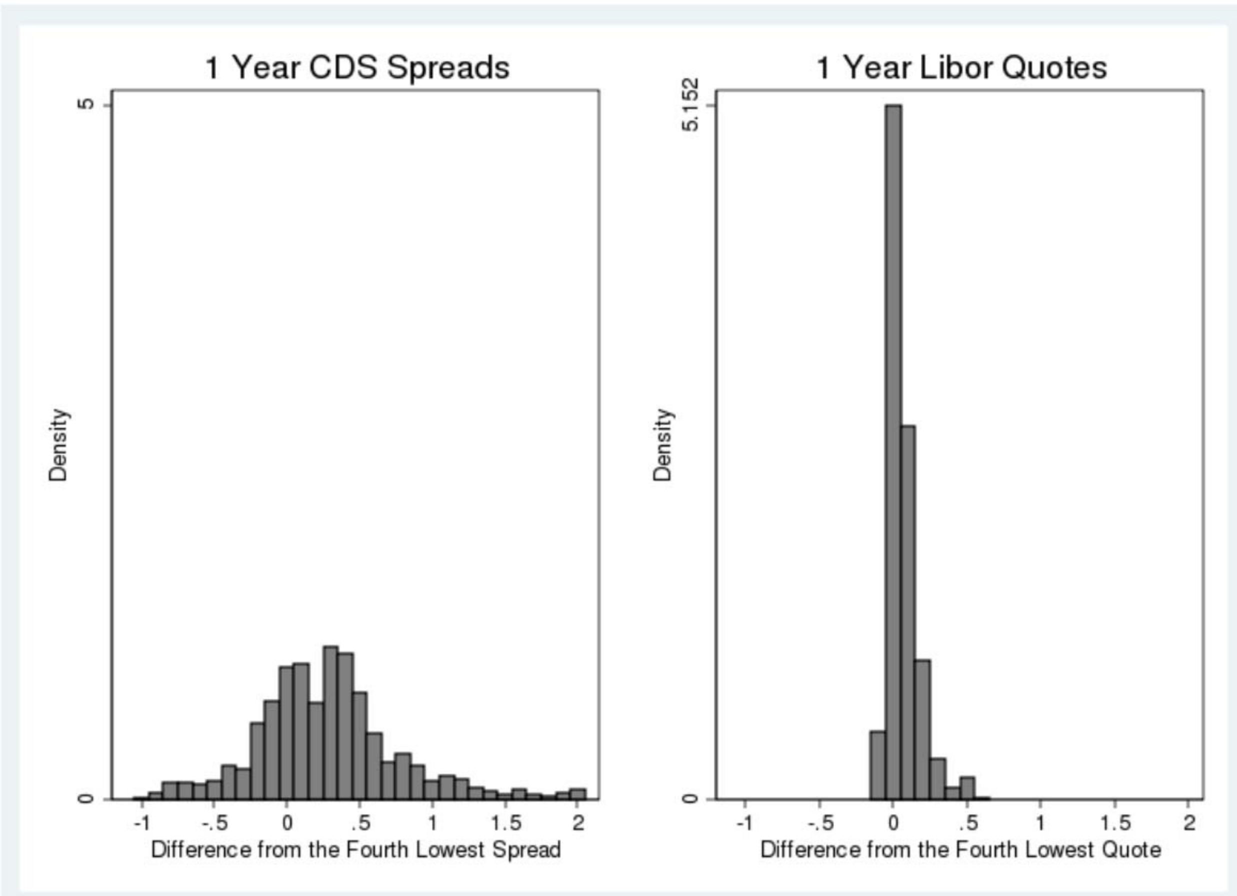


Figure O



131. Studies have found that other measures of bank creditworthiness—such as the spreads on CDS referencing each of these three banks—did not exhibit this bunching behavior during the Class Period. Figure P below illustrates this discrepancy with information comparing spreads on CDS referencing the panel banks with a term of one year with quotes submitted by the panel banks for one-year USD LIBOR.

Figure P



132. As Snider and Youle explain, the graphs in Figure P are "normalized by subtracting the value of the day's fourth highest quote for each bank quote," and the same is done for CDS spreads. As the Figure shows, USD LIBOR quotes cluster around the day's fourth lowest quote,

while CDS are more evenly distributed. "If banks were truthfully quoting their costs," the study notes, "we would expect these distributions to be similar."[87]

133. Similarly, a 2012 analysis found statistically significant evidence of non-random "joint participation" in the deciding group for USD LIBOR during the summer of 2008.[88] This means certain groups of banks tended to enter the deciding group on the same day at a suspiciously high frequency, providing further evidence of collusion.

I. Statistical Analysis of Management Directives Supports Collusion

134. Based on the specific information provided by regulators in the UBS settlements regarding the nature and timing of management's directives to "err on the low side" or to be "in the middle of the pack," a consulting expert in the LIBOR MDL examined the likelihood that UBS submitters could have complied with these directives absent collusion with the other Defendants. Specifically, the expert examined the period between June 18, 2008 and mid-April 2009.

135. First, the expert determined the frequency with which UBS's daily 3-month USD LIBOR submissions were "in the middle of the pack" during this time.

136. The expert then analyzed the likelihood that the UBS LIBOR submitters could have targeted "the middle of the pack" so often without colluding with the other panel banks. Specifically, the expert examined relevant public information available to those LIBOR submitters around 11:00 a.m. London time, which included: (i) prior day 3-month LIBOR submissions from the panel banks; (ii) changes in the Fed Eurodollar Rate, which would reflect

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[87] Snider & Youle at 6.

[88] Abrantes-Metz, *Libor Manipulation?*, 36 J. Banking & Fin. at 144-47.

changes in relevant market fundamentals from the prior day; and (iii) changes in the opening and closing prices of Eurodollar futures prices from one day and two days prior.

137. The expert found that between June 18, 2008 and April 14, 2009, UBS's USD LIBOR submitters very often fulfilled management's directive: UBS's 3-month USD LIBOR submissions were at or within the interquartile range[89] 99.0% of the time, and within the interquartile range 86.7% of the time. Additionally, DOJ found that, during the same time period, UBS's 3-month USD LIBOR submissions were identical to the published USD LIBOR, and often consistent with published USD LIBOR in the other tenors. The expert then determined, using probability analysis, that the likelihood of achieving this consistency based solely upon combined knowledge of points (i) and (ii), or points (i) and (iii), was less than 1%. The accuracy of UBS's submissions, and the duration over which it sustained such accuracy, strongly support that UBS had additional information, obtained through collusion,that allowed it to target its submissions.

DISCLOSURE OF THE FRAUD AND DEFENDANTS' ADMISSIONS

I. DISCLOSURE OF THE FRAUD

138. On March 15, 2011, UBS disclosed in a note to its Annual Report that it had received subpoenas from the United States Commodity Futures Trading Commission ("CFTC") and the DOJ in connection with investigations into LIBOR. This note marked the first public acknowledgment by any Defendant of the non-public CFTC investigation, which began in late 2008.[90] The Annual Report stated that the investigations focused on whether there were improper

[89] This term refers to the two middle quartiles of panel bank submissions.

[90] FSA Internal Audit, ¶ 1.1, *supra* note 86.

attempts by UBS, either acting on its own behalf or together with others, to manipulate LIBOR rates.

139. Over the next months, the expanding global investigations of manipulation of LIBOR and other benchmark rates was gradually revealed.

- On March 16, 2011, the *Financial Times* reported that the CFTC and/or the DOJ subpoenaed UBS, Bank of America, Citi, and Barclays regarding USD LIBOR. *Bloomberg* reported that regulators had also contacted Portigon, Lloyds, and Deutsche Bank.[91]

- Press reports revealed that Defendants WestLB, Lloyds, and Bank of America were contacted by regulators.

- A Competition Law Officer from the Canadian Competition Bureau submitted an affidavit in May 2011 in support of an *ex parte* application asking the Canadian courts to compel HSBC, RBS, Deutsche Bank, JPMorgan, and Citi to produce documents. The Canadian investigation relates to whether those banks conspired to "enhance unreasonably the price of interest rate derivatives from 2007 to March 11, 2010 . . . to prevent or lessen, unduly, competition in the purchase, sale, or supply of interest rate derivatives from 2007 to March 11, 2010, . . . to restrain or injure competition unduly from 2007 to March 11, 2010 . . . [and] to fix, maintain, increase or control the price for the supply of interest rate derivatives from March 12, 2010 to June 25, 2010."[92]

- In 2011, UBS secured conditional leniency from the DOJ for antitrust infringements related to Yen LIBOR and the Euroyen Tokyo Interbank Offered Rate ("TIBOR").[93]

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[91] Brooke Masters, Patrick Jenkins & Justin Baer, *Banks Served Subpoenas in Libor Case*, Fin. Times, Mar. 16, 2011, http://www.ft.com/intl/cms/s/0/52958d66-501f-11e0-9ad1-00144feab49a.html#axzz2vhJk8xIz; Joshua Gallu and Donald Griffin, Bloomberg, *Libor Probe Spurs Witness Call-Up at Citigroup, Deutsche Bank*, Mar. 23, 2011, http://www.bloomberg.com/news/2011-03-24/libor-manipulation-probe-spurs-witness-call-upat-citigroup-deutsche-bank.html.

[92] Affidavit of Brian Elliott (May 2011 Court of Ontario), ¶ 15, *available at* http://wallstreetonparade.com/wp-content/uploads/2012/07/AffidavitofBrianElliott-May182011.pdf.

[93] UBS AG, Form 6-K, July 26, 2011, at Note 15, *available at* http://www.ubs.com/global/en/about_ubs/investor_relations/other_filings/sec.html.

- Defendant HSBC, in an interim report filed on August 1, 2011, disclosed that it and/or its subsidiaries had "received requests" from various regulators to provide information and were "cooperating with their enquiries."

- On February 3, 2012, Credit Suisse disclosed that the Swiss Competition Commission had commenced an investigation involving 12 banks including Credit Suisse, and certain other financial intermediaries, concerning potential collusion among traders to affect and influence the bid-ask spread for derivatives tied to LIBOR.[94]

- On February 14, 2012, *Bloomberg* reported that European Union antitrust regulators were investigating whether banks formed a cartel to manipulate interest rates.[95]

- Press reports in August 2012 revealed that Bank of Tokyo suspended two London-based traders in connection with LIBOR as well as a third London-based banker who was in charge of submitting rates.

- In September 2012, sources reported that a former trader for RBS, Tan Chi Min, filed a 231-page affidavit with the Singapore High Court, which included contemporaneous messages authored during his tenure at RBS that reveal LIBOR fraud and collusion. In one message dated August 19, 2007, Mr. Tan wrote in an electronic discussion with traders at other banks, including Deutsche Bank's Mark Wong: "It's just amazing how Libor fixing can make you that much money or lose if opposite. It's a cartel now in London."[96]

II. BARCLAYS ADMISSIONS

140. Barclays admitted to a scheme to manipulate and suppress the published LIBOR rates in a detailed Statement of Facts as part of a settlement with the FSA, CFTC, and the DOJ's

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[94] Haig Simonian, *Swiss Probe 12 Banks Over Libor Allegations*, Fin. Times, Feb. 3, 2012, http://www.ft.com/intl/cms/s/0/9ba2396e-4e7f-11e1-aa0b-00144feabdc0.html#axzz2vhoucPDG.

[95] Lindsay Fortado & Joshua Gallu, *Libor Probe Said to Expose Collusion, Lack of Internal Controls*, Bloomberg, Feb. 14, 2012, http://www.bloomberg.com/news/2012-02-15/liborinvestigation-said-to-expose-collusion-lack-of-internal-controls.html.

[96] Andrea Tan, Gavin Finch, & Liam Vaughan, *RBS Instant Messages Show Libor Rates Skewed for Traders*, Bloomberg, Sept. 26, 2012, http://www.bloomberg.com/news/2012-09-25/rbsinstant-messages-show-libor-rates-skewed-for-traders.html.

Fraud Section to avoid prosecution in the United Kingdom and the United States. In the United Kingdom, as part of its settlement with the FSA, Barclays agreed to pay $92.8 million in fines. The CFTC issued an Order Instituting Proceedings ("Barclays CFTC Order") finding that Barclays violated the Commodity Exchange Act, and ordered Barclays to pay $200 million—the largest civil penalty the CFTC had ever imposed. And Barclays' settlement with the DOJ required it to pay another $160 million. Together its fines totaled approximately $453 million.

141. The Statement of Facts, which cites scores of internal emails, as well as communications with other panel banks in furtherance of the scheme, details Barclays fraud and collusion. Marcus Agius, then-Chairman of Barclays, said in a press release at the time: "The Board takes the issues underlying today's announcement extremely seriously and views them with the utmost regret."

142. Barclays admitted that, starting at least by August 2007, it intentionally submitted "improperly low" USD LIBOR quotes that did not reflect Barclays' actual borrowing costs. Barclays confirmed that "all of the Contributor Panel banks, including Barclays, were contributing rates that were too low" during this same period. Following the settlements, Agius and Barclays' CEO Bob Diamond resigned—just before Barclays' Chief Operating Officer, Jerry del Missier, testified that Diamond had instructed him to lower the bank's LIBOR submissions—or that Barclays should "'get our Libor rates down— we shouldn't be outliers.'"[97] Del Missier also testified that he was aware that Barclay's compliance department was informed of his

[97] Sharlene Goff, *Del Missier Spells out Differences on Libor*, Financial Times (July 16, 2012), available at http://www.ft.com/intl/cms/s/0/0094e92e-cf64-11e1-a1d2-00144feabdc0.html#axzz303AXi8sw.

instruction, but "'[c]ompliance never followed up,'"[98] though in any event Del Missier thought the instruction "'seemed appropriate' given the chaos in financial markets at the time," and that he was not doing anything illegal.[99] On July 4, 2012, the day after Bob Diamond stepped down, he told the British Parliament: "There is an industry-wide problem coming out now."

143. The disclosures in July 2012 resulting from these governmental investigations into Barclays revealed, for the first time, the type of collective manipulation of LIBOR by Defendants that had occurred.

144. In early September 2007, after Barclays reported higher USD LIBOR rates than its peers, a *Bloomberg* article entitled "Barclays Takes a Money-Market Beating" questioned "[s]o what the hell is happening at Barclays and its Barclays Capital securities unit that is prompting its peers to charge it premium interest in the money market?" Other newspapers, including the *Financial Times* and *The Standard*, ran similar articles.

145. Thereafter, on November 29, 2007, the supervisor of the USD LIBOR submitters at Barclays convened a meeting with senior Barclays Treasury managers and the USD LIBOR submitters in which he noted that if the submitters made accurate quotes, they would be 20 basis points above "the pack."

146. Barclays could not have known where its submission would stand relative to other banks without knowing those banks' submissions prior to publication, in violation of the LIBOR panel rules. The supervisor elevated the issue to more senior levels of Barclays' management, after which the group decided to adjust Barclays' LIBOR submission downward by 20 basis points in order to stay within the range of other banks' low LIBOR submissions. Barclays

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[98] *Id.*

[99] *Id.*

managers issued standing instructions to stay within specific ranges of other panel banks' USD LIBOR submissions, indicating that Barclays believed it would have continued access to the confidential LIBOR submissions of other banks before they were published. According to the CFTC's review of the evidence it collected, "Senior Barclays Treasury managers provided the [LIBOR] submitters with the ***general guidance*** that Barclays's submitted rates should be ***within ten basis points*** of the submissions by the other U.S. Dollar panel banks . . . .".[100]

147. In addition, a Barclays manager contacted a representative of the BBA to advise that "[USD] LIBORs are being set lower than where they ought to be" and informed the BBA that this issue applied to all of the panel banks. The Barclays manager stated that Defendants were submitting rates that were too low because "banks are afraid to stick their heads above the parapet and post higher numbers because of what happened to [Barclays] when [Barclays] did. You get shot at." According to the Barclays manager, "other banks 'are reluctant to post higher and because no one will get out of the pack, ***the pack sort of stays low***.'"[101]

148. On November 30, 2007, a private discussion occurred between a representative of Barclays and the FSA. An internal Barclays memorandum reveals that Barclays "didn't say anything along the lines of, you know, we're not posting where we think we should." On December 4, 2007, however, a senior Barclays USD LIBOR submitter emailed his supervisor about submitting a 1-month LIBOR lower than he would prefer if he were "given a free hand," and explicitly stated: "My worry is that we (both Barclays and the contributor bank panel) are being seen to be contributing ***patently false rates***. We are therefore being ***dishonest by***

[100] Barclays CFTC Order at 20 (emphasis added).

[101] Barclays SOF ¶ 43 (emphasis added).

definition and are at risk of damaging our reputation in the market and with the regulators."[102] In another email, the senior Barclays USD LIBOR submitter wrote: "I will be contributing rates which are nowhere near the clearing rates for unsecured cash and therefore ***will not be posting honest prices***."[103]

149. Barclays' managers specifically instructed Barclays USD LIBOR submitters to make artificially low LIBOR submissions and to do so in coordination with the submissions of other Defendants—that is, to stay "within the pack."[104] Barclays' submitters were told "they would have to deal with the settings, meaning how to make LIBOR submissions per this directive, on a 'day-to-day-basis.'" The CFTC found that Barclays' managers "frequently discussed with the U.S. Dollar LIBOR submitters and their supervisor the specific rates to be submitted, in order to ensure they were in compliance with the directive." The CFTC observed that those discussions "were memorialized in multiple recorded telephone calls and emails during the more than 18-month financial crisis period."

150. Internal communications at Barclays made public in connection with the investigation further reveal that the other panel banks were doing the same. In one internal Barclays email, for instance, a Barclays employee noted that Lloyds' USD LIBOR submission was artificially low.[105] Similarly, on October 3, 2007, a Barclays employee noted internally that an unidentified panel bank submitted a LIBOR rate that was lower than the rate it actually

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[102] Barclays CFTC Order at 22 (emphasis added).

[103] *Id*. at 24 (emphasis added).

[104] Barclays SOF ¶ 37.

[105] Email to Pat Leising (dated Aug. 28, 2007), BCI-H0000071-72.

paid.[106] On April 27, 2008, a Barclays manager conceded in a recently-disclosed liquidity call to the FSA "***to the extent that, um, the LIBORs have been understated, are we guilty of being part of the pack? You could say we are.***" In communications between November 2007 and October 2008, Barclays' employees revealed that "all of the Contributor Panel banks, including Barclays, were contributing rates that were too low."[107]

151. According to documents found by the government investigations, on numerous occasions between January 2005 and June 2009, Barclays' derivatives traders requested that submitters make false submissions that favored their trading positions. Specifically, the CFTC found that "Barclays based its LIBOR submissions for U.S. Dollar . . . on the requests of Barclays' swaps traders, including former Barclays swaps traders, who were attempting to affect the official published LIBOR, in order to benefit Barclays' derivatives trading positions; those positions included swaps and futures trading positions."[108]

152. The majority of these requests came from traders on Barclays' New York Interest Rate Swaps Desk and involved USD LIBOR, and included requests made on behalf of other banks. The requests were made openly, sometimes shouted across the office to confirm that no conflicting requests for manipulation were made. The traders' conduct was common and pervasive, and known by other traders and trading desk managers located near the New York Swaps Desk. Some traders made entries in their electronic calendars to remind themselves what requests to make of Barclays' LIBOR submitters the next day.

[106] E-mail to Jason Miu (dated October 3, 2007), BARC-MAY6000086-87.

[107] Barclays SOF ¶ 42.

[108] Barclays CFTC Order at 2.

153. The following provide just a sample of the numerous requests made by Barclays' traders, as revealed in documents quoted in Barclays' settlement papers:

- WE HAVE TO GET KICKED OUT OF THE FIXINGS TOMORROW!! We need a 4.17 fix in 1m (low fix)."
- "You need to take a close look at the reset ladder. We need 3M to stay low for the next 3 sets . . . ."
- "This is the [book's] risk. We need low 1M and 3M libor. Pls ask [submitter] to get 1M set to 82. That would help a lot."
- Hi Guys, We got a big position in 3m libor for the next 3 days. Can we please keep the lib or fixing at 5.39 for the next few days. It would really help. We do not want it to fix any higher than that. Tks a lot."
- "Hi mate[.] We have an unbelievably large set on Monday (the IMM). We need a really low 3m fix, it could potentially cost a fortune. Would really appreciate any help, I'm being told by my NYK [counterparts in New York] that it's extremely important. Thanks."
- "I really need a very very low 3m fixing on Monday—preferably we get kicked out. We have about 80 yards [billion] fixing for the desk and each 0.1 [one basis point] lower in the fix is a huge help for us. So 4.90 or lower would be fantastic."

154. The documents revealed by the investigation also confirm that the LIBOR submitters regularly altered Barclays' USD LIBOR reports based on the traders' requests. For example, on December 19, 2006, a Barclays trader sent an email to a Barclays submitter with the subject line, "3m Libor," asking, "Can you pls [please] continue to go in for 3m Libor at 5.365 or lower, we are all very long cash here in ny." The submitter asked, "How long . . . ?" The trader replied, "Until the effective date goes over year end (i.e. turn drops out) if possible." The submitter replied, "Will do my best sir." On December 19, 20, and 21, 2006, Barclays' 3-month USD LIBOR submissions were 5.37%, 5.37%, and 5.375%, respectively.

155. On December 21, 2006, the submitter created an electronic calendar entry stating, "SET 3 MONTH US$ LIBOR LOW!!!!!!" that was scheduled to begin on December 22, 2006, at 9:00 a.m. and continue until January 1, 2007, at 9:30 a.m. On December 22, 2006, and the subsequent trading days through the end of the year, Barclays' 3-month USD LIBOR submissions were 5.36%, 5.365%, 5.35%, and 5.36%, respectively.

156. By way of further examples where the submitters directly agreed to make false submissions:

- "For you . . . anything. I am going to go . . . 92.5. It is difficult to go lower than that in threes. looking at where cash is trading. In fact, if you did not want a low one I would have gone 93 at least."

- "Always happy to help, leave it with me, Sir."

- Trader C: "The big day [has] arrived . . . . My NYK are screaming at me about an unchanged 3m libor. As always, any help wd be greatly appreciated. What do you think you'll go for 3m?" Submitter: "I am going 90 altho[ugh] 91 is what I should be posting." Trader C: "[W]hen I retire and write a book about this business your name will be written in golden letters." Submitter: "I would prefer this [to] not be in any book!"

- Submitter: "Hi All, Just as an FYI, I will be in noon'ish on Monday . . . ." Trader B: "Noonish? Whos going to put my low fixings in? hehehe." Submitter: "[X or Y] will be here if you have any requests for the fixings." Confirming the requests did not go unheeded, Barclays' 3-month USD Libor submission on March 13, 2006, was 4.90%, which was tied for the lowest rate submitted.

- Trader C: "If it's not too late low 1m and 3m would be nice, but please feel free to say 'no' . . . Coffees will be coming your way either way, just to say thank you for your help in the past few weeks." Submitter: "Done . . . for you big boy."

- On February 5, 2008, Manager B instructed Trader B to: "just tell him to keep it, to put it low." Trader B said that he had "begged" the submitter to put in a low Libor submission and the submitter had said he would "see what I can do."

157. The FSA made similar findings in a Final Notice ("Barclays FSA Final Notice"). Based on the evidence it uncovered, the FSA determined Barclays was engaged in widespread and pervasive misconduct with respect to its LIBOR submissions. The FSA found that between January 2005 and May 2009, derivatives traders made at least 173 requests for USD LIBOR submissions to Barclays' submitters.

158. These manipulations were also carried out with the help of, and at the request of, other panel banks. For instance, after a trader at another bank requested a low LIBOR setting from Barclays and, when the Barclays trader agreed, the trader responded: "Dude, I owe you big time! Come over one day after work and I'm opening up a bottle of Bollinger! Thanks for the LIBOR." Similarly, a trader from an unidentified bank requested that Barclays set its LIBOR quote low: "I know I'm asking for much, but ONLY if u guys care, a low 3m libor would be great…anywhere below 5.35…thanks dude." The FSA found that between February 2006 and October 2007, derivatives traders made at least 63 requests to external traders with the aim that those traders would pass on the requests for USD LIBOR submissions to their bank's submitters.

159. According to the FSA's findings, at least 14 derivatives traders at Barclays were involved in this manipulation, including senior derivative traders and trading desk managers. Further demonstrating the complete lack of controls, willingness to conspire, and general corruption in the system, the FSA and other investigations found this problem to extend beyond USD LIBOR. For instance, the FSA found that between September 2005 and May 2009, derivatives traders made at least 58 requests for Euribor submissions to Barclays' submitters (including 20 requests based on communications from derivative traders at other banks) and between August 2006 and June 2009, at least 26 requests for JPY LIBOR submissions were made to Barclays' submitters.

160. An independent review conducted by Anthony Salz, the former senior partner of Freshfields Bruckhaus Deringer LLP, found that Barclays developed a win-at-all-costs culture that laid the foundation for Barclays' misconduct in the LIBOR scandal. The Salz Review quoted Alistair Darling, the former Chancellor of the Exchequer: "Quite clearly, there was a culture here that tolerated—if it didn't encourage—this sort of behaviour."[109] And Benjamin Heineman, General Electric's former general counsel and senior fellow at Harvard Law School, noted that this was a case in which the authorities "'squeezed Barclays and Barclays yelped, which will be important for the making of cases against the other Libor banks. There was obviously collusion with other banks.'"[110]

III. UBS ADMISSIONS

161. On December 19, 2012, UBS announced a settlement with numerous regulators under which it would pay over $1.5 billion in fines (including $400 million to the DOJ) and have its Japanese subsidiary plead guilty to felony wire fraud and pay a $100 million fine. The investigations concluded that UBS's managers were well aware of and "actively involved in UBS's attempts to manipulate LIBOR and EURIBOR submissions." The FSA found a "total disregard for proper standards by these Traders and Brokers," which was "clear from the documented communications in which particular individuals referred to each other in congratulatory and exhortatory terms such as 'the three muscateers [sic],' 'superman,' 'be a hero today,' and 'captain caos [sic].'"

[109] Anthony Salz, *An Independent Review of Barclays' Business Practices*, ¶ 3.20 (Apr. 2013).

[110] James B. Stewart, *Calculated Deal in a Rate-Rigging Inquiry*, New York Times (July 13, 2012), available at http://www.nytimes.com/2012/07/14/business/in-barclays-inquiry-thecalculation-in-making-a-deal-common-sense.html?pagewanted=all&gwt=regi&_r=0.

162. In its own corporate statement commenting on the settlements with U.S. and U.K. regulators, UBS conceded that "employees at the bank colluded with employees at other banks and cash brokers to influence certain benchmark rates . . . ." and that UBS personnel gave "inappropriate directions to UBS submitters" that were designed to misrepresent the bank's financial condition.[111]

163. Under the non-prosecution agreement, UBS agreed to admit to a Statement of Facts detailing its manipulation of LIBOR and other benchmark interest rates. The statement revealed that UBS had no systems, controls, policies, or procedures governing its LIBOR submissions. No formal training was even given to those responsible for making the submissions. It was not until August 2008 that UBS tried to enact such procedures—but even then they did not address the inherent conflicts of interest in mixing trading and submission resources.

164. On December 11, 2012, the U.K. Serious Fraud Office arrested three individuals: Thomas Hayes, who had worked as a trader for Defendant UBS, among others, and Terry Farr and Jim Gilmour, both employees of brokerage firm RP Martin Holdings Ltd. It was reported that UBS fired 24 employees in connection with the investigation of its LIBOR manipulation. The same day UBS announced its settlement with regulators, the DOJ's criminal complaint against former senior UBS traders Hayes and Roger Darin (the "Hayes-Darin Complaint") was unsealed. According to the Hayes-Darin Complaint, Hayes attempted to pressure colleagues and employees at other banks into manipulating Tibor. For example:

- On March 3, 2010, Hayes told a broker "i really need a low 3m jpy libor into the imm [the International Monetary Market date, which occurs quarterly on the third Wednesday of March, June, September, and

[111] Press Release, UBS, *UBS Board of Directors authorizes settlements of LIBOR-related claims with US and UK authorities; Swiss regulator to issue order* (Dec. 19, 2012).

December]," and "any favours you can get with the due at [Bank C] would be much appreciated" "even if he only move 3m down 1bp." The broker said "i'll give him a nudge later, see what he can do" and then asked the Bank C submitter: "u see 3m jpy libor going anywhere btween now and imm?" noting "we have a mutual friend who'd love to see it go down, no chance at all?" The Bank C submitter said "haha TH by chance," and the broker responded "shhh."

- The Hayes-Darin Complaint notes that, the next day, Bank C's 3-month JPY LIBOR submission decreased by one basis point compared to the previous day. After the LIBOR submissions were posted, the Bank C submitter reported back to the broker: "Libor lower," and the broker responded "good work!!!!"

- On May 12, 2010, Hayes told a UBS submitter: "libors are going down tonight" "because i am going to put some pressure on people."

165. Hayes and Darin were charged with conspiracy to commit wire fraud. Hayes was also charged with price fixing in violation of the Sherman Act:

> In or about May 2009, in the Southern District of New York and elsewhere, TOM ALEXANDER WILLIAM HAYES, the defendant, and his co-conspirators, including an employee at a major financial institution, and others known and unknown, engaged in a combination and conspiracy in unreasonable restraint of interstate and foreign trade and commerce in violation of Section 1 of the Sherman Act. The aforesaid combination and conspiracy consisted of an agreement, understanding, and concert of action among HAYES and his co-conspirators, the substantial terms of which were to fix Yen LIBOR, a key price component of Yen LIBOR-based derivative products.

Hayes-Darin Complaint at 3.

166. As with Barclays, the investigative materials confirm that the panel banks were manipulating their LIBOR submissions in a coordinated way to line their own pockets and to make themselves appear healthier than they really were. The FSA's Final Notice states "UBS sought to manipulate Libor and Euribor in order to improve the profitability of trading

positions."[112] The CFTC reached the same conclusion, and also found that UBS worked with at least four other panel banks to make false submissions, and induced at least five interdealer brokers to disseminate false information or otherwise influence other panel banks' submissions."[113]

167. The FSA concluded that UBS "acted improperly" in making false LIBOR submissions. As summarized by the FSA:

> In reaction to increased media scrutiny of the financial standing of and banks' LIBOR submissions during the financial crisis, UBS directives to its LIBOR submitters intended to: 'protect our franchise in these sensitive markets' . . . . These directives changed over time, but for a significant part of the period from at least 17 June 2008 to at least December 2008, ***their purpose was to influence UBS's LIBOR submissions to ensure that they did not attract negative media comment about UBS's creditworthiness***.

168. Similarly, the CFTC concluded that, from August 2007 through mid-2009, UBS managers directed that the bank's USD LIBOR submissions be artificially suppressed so as to "***place UBS in 'the middle of the pack' of panel bank submissions*** . . . . [T]hese directions, at times, caused UBS's U.S. Dollar LIBOR and other benchmark submissions to be knowingly false."

169. The decision to lower submissions was memorialized in an August 9, 2007 email from the Head of Asset and Liability Management to the Manager of the Derivatives Trading Desk that submitted the majority of UBS's LIBOR contributions, and others: ***"[I]t is highly advisable to err on the low side with fixings for the time being to protect our franchise in these***

[112] *See* UBS FSA Final Notice ¶ 15b.

[113] *See* CFTC Press Release: PR6472-12, U.S. Commodity Futures Trading Commission, *CFTC Orders UBS to Pay $700 Million Penalty to Settle Charges of Manipulation, Attempted Manipulation and False Reporting of LIBOR and Other Benchmark Interest Rates* ("CFTC Press Release") (Dec. 19, 2012).

sensitive markets. Fixing risk and [profit and loss] thereof is secondary priority for now." The next day, UBS dropped its overnight submission 50 basis points.

170. Consistent with this new practice, a UBS derivatives trader advised a USD LIBOR submitter that, as to UBS's LIBOR contribution that day, the "aim should really be to be on the lower side of range." When the submitter described his intended submission, the derivatives trader responded, "this seems probably a tad low right now, but recon [sic] that's what we should try to be," and added, "we just don't want to give the market a wrong impression . . . . so therefore don't want to be on the highs of libors." Later that day, before leaving for vacation, the submitter reminded his replacement to "[p]lease remember to err on the low side." A month later, on September 5, 2007, the USD LIBOR submitter informed a senior manager in the Investment Bank: "we are fixing on the low side of all other banks in the libor panel in the 4-12 mo period by several bps . . . . [As a] bank we are erring on the low side."

171. Traders understood that this direction came from UBS's senior management. In a September 5, 2007 electronic chat, for instance, a trader complained about UBS's low LIBOR submissions, stating that "***all senior management . . . want to show the world we are the strongest bank with loads of liquidity.*** We'd lend at 0 US!"

172. In June 2008, a UBS Senior Manager instructed USD LIBOR submitters to lower their submissions over the next three days "to get in line with the competition." UBS's 3-month USD LIBOR submissions immediately dropped 5 basis points to the "middle of the pack."

173. In one 2008 internal exchange via electronic chat, a UBS employee noted that "Libors are currently even more fictitious than usual." The first UBS employee asks, "isn't Libor meant to represent the rates at which banks lend to each other?" The response: ***"it's a made up number"*** that the panel banks were underreporting at the time "to not show where they

really pay in case it creates headlines about . . . being desperate for cash." Or as one UBS senior manager explained the reason for UBS's "middle of the pack" directive: ***"the answer would be 'because the whole street was doing the same and because [UBS] did not want to be an outlier in the Libor fixings, just like everybody else.'"***

174. As with Barclays, recently released materials show that the bank was also manipulating its submissions to directly line its own pockets. For instance, in reference to USD LIBOR, a UBS trader in Connecticut emailed that the submitting office had "only one mission . . . We need 3mo Libor set low."

175. The corrupt nature of the rate-submission process is also seen in how rates other than USD LIBOR were manipulated. Recently revealed emails show traders asking for JPY submitters: "Can we pls go for lower Libors tonight, across all tenors," and "hi . . . can we go low 1m and 3m again pls." Like Barclays, the evidence shows the submitters responded favorably writing "will do" and "we can try." The FSA found that UBS traders "routinely" made requests of UBS's LIBOR submitters to adjust submissions to benefit UBS trading positions, including "more than 800 documented Internal Requests" to manipulate JPY Libor and "more than 115 Internal Requests" to manipulate other currency-denominated LIBOR, including USD LIBOR. The FSA also found that UBS "colluded with interdealer brokers to attempt to influence the JPY Libor submissions of other banks" and were in "regular contact" with at least four other banks. According to the Japanese FSA, while employed by UBS, Thomas Hayes "attempted to pressure colleagues and employees at other banks involved in the rate-setting process for the Tokyo Interbank Offered Rate, or Tibor." For example, UBS admitted that on March 31, 2009,

Trader-1 (identified in the press as Hayes)[114] "***asked Broker C to help influence 9 of the 16 banks*** by convincing them to lower their LIBOR submissions from the previous day, thus lowering the resulting 1-month and 3-month Yen LIBOR fix." The CFTC found similarly that Hayes communicated with other JPY LIBOR panel banks in an effort to manipulate that benchmark:

> As with his internal requests, the Senior Yen Trader began coordinating regularly with derivatives traders at other panel banks by January 2007. The Senior Yen Trader coordinated with traders primarily at four panel banks whom he knew or had worked with previously. The Senior Yen Trader, or others acting on his behalf, made about 100 requests of traders at the other panel banks.
>
> The Senior Yen Trader generally made requests of the other banks' traders, who regularly agreed to pass his requests to their Yen LIBOR or, on occasion, Euroyen TIBOR submitters. The Senior Yen Trader also made requests directly of the submitter of at least one bank. The other traders often conveyed success with comments such as, "done" and "we normally do well for u!!!"[115]

176. On May 15, 2014, the CFTC announced related penalties concerning UBS's Yen LIBOR manipulation against RP Martin Holdings Limited, as well as a subsidiary. Specifically, the CFTC settled charges that RP Martin brokers working on its Yen desk "at times knowingly disseminated false and misleading information concerning Yen borrowing rates to market participants in attempts to manipulate, at times successfully, the official fixing of the daily Yen Libor," and engaged in this conduct "primarily to aid and abet a senior Yen derivatives trader . . . employed at [UBS] and later at another bank."[116] The CFTC Order also indicates, among other

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[114] A press report identifies the Senior Yen Trader as Hayes. *See* David Enrich, *Rate-Rig Spotlight Falls on 'Rain Man'*, Wall Street Journal, (Feb. 8, 2013), available at http://online.wsj.com/article/SB10001424127887324445904578285810706107442.html

[115] CFTC Order at 17.

[116] CFTC Release dated May 15, 2014, at 1.

things, that RP Martin "contacted certain Yen LIBOR submitters and asked them directly to move their Yen LIBOR submissions in a manner that would benefit the Senior Yen Trader."[117]

177. In December 2012, UBS Securities Japan Co., Ltd., the entity where Hayes worked, agreed to plead guilty to one count of wire fraud, 18 U.S.C. § 1343, for secretly manipulating JPY LIBOR and Tibor. UBS Securities Japan admitted in its plea that false and misleading LIBOR submissions were "material".

178. On June 18, 2013, the U.K. Serious Fraud Office charged Hayes with eight counts of conspiracy to defraud. According to a June 21, 2013 *Wall Street Journal* article, each of the eight charges accuse Hayes of "dishonestly seeking to manipulate [LIBOR] . . . with the intention that the economic interests of others would be prejudiced and/or to make personal gain for themselves or another." In addition, the charges allege that Hayes conspired with employees at eight banks and interdealer brokerage firms, as well as with colleagues at UBS and Citi. The banks include JPMorgan, Deutsche Bank, and RBS. In January 2013, Hayes sent a text message to the *Wall Street Journal* stating "this goes much higher than me."

179. UBS has suspended employees for their involvement in manipulating LIBOR, including Yvan Ducrot, who was the co-head of UBS's rates business. Holger Seger, the global head of short-term interest rates trading at UBS, was likewise suspended by UBS in connection with international probes and ultimately left his position in April 2012.

180. As with Barclays, the UBS evidence shows that this corruption spread across banks, as UBS traders are seen corresponding with traders at other banks (identified only as, for example, "Bank B" in the released materials) along the lines of "if you could ask your guys to

[117] *Id.*

keep 3m low wd be massive help," "real big favour to ask, could you try for low 6m fix today pls wld be most appreciated," and "I need you to keep it as low as possible." As with the internal corruption, the responses at the other (unidentified) banks would be favorable: "will try my best . . . hows u ? ? ?" and "ill try and push a few fictitious offers and this mg see if that helps."

181. UBS's employees were richly rewarded for their rate-rigging efforts. For example, two traders whose positions depended on LIBOR rates engaged in wash trades (*i.e.*, risk-free trades that cancelled each other out and which had no legitimate commercial rationale) to gin up "corrupt brokerage payments . . . as reward for their efforts" to manipulate the submissions. In a 2008 phone conversation recently detailed by the FSA, a UBS trader promised the UBS broker to do "one humongous deal with you" if the JPY LIBOR rate was kept "as low as possible." The trader went on: "I'll pay you, you know, 50,000 dollars, 100,000 dollars . . . whatever you want . . . I'm a man of my word." UBS made "corrupt payments of £15,000 per quarter to Brokers to reward them for their assistance" in rigging LIBOR.

IV. RBS ADMISSIONS

182. RBS also has admitted to wide-ranging rate-setting misconduct as part of settlements with multiple government authorities. RBS's CEO stated in advance of the settlement that the bank's LIBOR-related misconduct "is a deeply regrettable thing . . . . the sort of thing the industry has to put behind it." Similarly, Johnny Cameron, RBS's former Chairman of Global Banking and Markets, stated before British Parliament that LIBOR manipulation involved ***"a cartel of people across a number of banks who felt they could fix it."*** RBS's primary regulator, the FSA, found that RBS's LIBOR submissions process suffered from pervasive conflicts of interest that undermined the integrity of its submissions.

183. RBS's USD LIBOR submissions were in the bottom half of the panel banks more than two-thirds of the time. That RBS was reporting below-median borrowing costs throughout the Class Period is remarkable given the depth of RBS's financial problems at the time. Despite mounting concern about RBS's stability in September 2008, the bank's LIBOR submissions only briefly exceeded their 2007 peak.

184. RBS delegated responsibility for its daily LIBOR submissions to fixed-income traders whose "bonuses were linked in part to the profit and loss ('P&L') of their money market trading books." This gave RBS's traders significant incentives to falsify their LIBOR submissions to influence profits on the bank's own positions. The FSA concluded that the risk traders would alter their LIBOR submissions to suit their trading strategies "crystallized with respect to RBS's JPY, CHF, and USD LIBOR submissions."

185. Emails, instant messages, and telephone transcripts recently made public confirm that RBS's employees knew that ***"people are just setting Libors to suit their books"*** and ***"it's just where you've got your fixing really."***[118] That is, the submissions were set only in relation to what would make RBS the most money. One submitter acknowledged that ***"I set a rate to benefit my interest as a Money Market trader."***[119] According to telephone transcripts obtained by *Bloomberg*, Paul Walker, who headed RBS's money-markets trading and was responsible for its USD LIBOR submissions, summed up his views in call with another trader: "Libor is what you say it is."[120] *Bloomberg* reported that these same phone transcripts showed "[s]enior

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[118] RBS FSA Final Notice ¶ 71 (emphasis in original).

[119] *Id.* (emphasis in original).

[120] Liam Vaughan & Gavin Finch, *Secret Libor Transcripts Expose Trader Rate-Manipulation*, Bloomberg, Dec. 13, 2012.

managers at RBS, Britain's largest publicly owned lender, knew banks were systematically rigging Libor as early as August 2007."[121] Walker was fired in the months before RBS's settlement with regulators.[122]

186. One RBS trader gloated, "[i]t's just amazing how Libor fixing can make you that much money . . . ***It's a cartel now in London***."[123] As for outside investors, another RBS trader responded, "Must be damn difficult to trade, man . . . . Especially [if] you [are] not in the loop."[124]

187. The FSA's Final Notice described specific instances where traders at RBS made fraudulent USD LIBOR submissions to inflate trading profits. For example, in 2007 one trader told an RBS colleague "I've got massive fixing in ones, so I said to [the trader] I just want the really, really low ones." The reference to "massive fixing" was to a $4 billion borrowing facility RBS had that was set to fix at the time the requests were made. RBS's submissions for 1-month USD LIBOR dropped, just in time for RBS's "massive fixing." The trader was unsatisfied, complaining that "we need usd libor to drop faster," and sought confirmation that "on monday, usd libor will drop 5bps."

188. A similar example took place between March 9 and March 18, 2010, when another trader explained to the submitter how he "wanted to keep [USD LIBOR] down because of some fixes." The submitter confirmed his understanding that "we do have some big fixes in London

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[121] *Id.*

[122] Lindsay Fortado, *RBS Traders Helped UBS's Hayes with Libor Bribes, Regulators Say*, Bloomberg, Feb. 6, 2013.

[123] Andrea Tan, *RBS Instant Messages Show Libor Rates Skewed for Traders*, Bloomberg, Sept. 26, 2012 (emphasis added).

[124] *Id.*

so suits for low libors." RBS's USD LIBOR submissions stayed low while five large, dollar-denominated, floating-rate transactions fixed.

189. These episodes typify how, according to the RBS FSA Final Notice, RBS's LIBOR submitters "inappropriately considered the impact of LIBOR and RBS's LIBOR submissions on the profitability of transactions in its money market trading books as a factor when making (or directing others to make)" LIBOR submissions, including USD LIBOR.

190. As with the other settling banks, the corrupt nature of the process is further confirmed by the fact that RBS's manipulation extended beyond USD LIBOR. For example, on August 17, 2007, two RBS traders discussed their planned manipulation of both USD LIBOR and JPY LIBOR: "so on Monday, usd libor will drop 5bps, but jpy [LIBOR] will only follow suit a few days later." As this exchange demonstrates, the same individuals were often involved in manipulating Libor across different currencies.

191. *Bloomberg*'s December 13, 2012, article entitled "Libor Transcripts Expose Rate-Rigging With Police Nearby" recites transcripts of instant messages and telephone conversations among RBS's traders agreeing to rig LIBOR. For example, *Bloomberg* reviewed a transcript of an instant message discussion held on December 3, 2007, wherein Jezri Mohideen, then RBS's head of JPY products in Tokyo, instructed colleagues in the United Kingdom to lower the bank's six month LIBOR submission that day, ordering "'We want lower Libors . . . . Let the money market guys know." Will Hall, a trader in London, confirmed, "Sure, I'm setting." Mohideen replied, "Great, set it nice and low."

192. Hall was also named in an affidavit filed by a Canadian Competition Law Officer in LIBOR-related proceedings in Canada. The affidavit sought orders requiring RBS and other

banks[125] to produce documents in connection with an inquiry concerning whether the banks conspired to "enhance unreasonably the price of interest rate derivatives from 2007 to March 11, 2010; to prevent or lessen, unduly, competition in the purchase, sale or supply of interest derivatives from 2007 to March 11, 2010; to restrain or injure competition unduly from 2007 to March 11, 2010; and to fix, maintain, increase or control the price for the supply of interest rate derivatives from March 12, 2010 to June 25, 2010."

193. According to the affidavit, Hall colluded with other traders to manipulate JPY LIBOR. Other traders at RBS have been implicated in the LIBOR scandal, including Brent Davies, another trader in London who, like Hall, was named in the Canadian Competition Law Officer's affidavit for manipulation of JPY LIBOR.

194. Further details on the rigging of JPY LIBOR have been revealed in a Singapore wrongful termination lawsuit. In that case, Tan Chi Min, former head of delta trading for RBS's global banking and markets division in Singapore (who worked for RBS from August 12, 2006 to November 9, 2011), was terminated over accusations that "he tried to improperly influence the bank's rate setters from 2007 to 2011 to persuade them to offer Libor submissions that would benefit his trading positions." According to Tan, however, it was acceptable at RBS for traders to attempt to influence LIBOR submissions. Tan further alleges that his manager, Todd Morakis, confirmed to him around October 2011 that "the practice of requesting to change the rate Libor is common in every rate setting environment in the banking industry."

195. RBS was charged with violating the Sherman Act due to its manipulation of JPY LIBOR. In a deferred prosecution agreement filed on February 6, 2013, RBS acknowledged and

[125] Those banks include Deutsche Bank and JPMorgan.

agreed that the DOJ will file a two-count criminal information in the United States, alleging one count of price-fixing, in violation of the Sherman Act, Title 15, United States Code, Section 1. RBS Deferred Prosecution Agreement ("DPA"). As part of that agreement, RBS "admits, accepts, and acknowledges that it is responsible under United States law for the acts of its officers, directors, employees, and agents as charged in the Information, and as set forth in the Statement of Facts."[126]

196. RBS agreed that by colluding to manipulate JPY LIBOR, RBS colluded to fix the price of LIBOR-based instruments because JPY LIBOR is a component of price of LIBOR-based instruments:

> Traders, former traders, and/or submitters at competing financial institutions, including RBS, agreed to coordinate and in fact coordinated with regard to Yen LIBOR submissions, causing the manipulation of the LIBOR reference rate on certain occasions. Because Yen LIBOR was a pricing component of derivatives contracts held by the financial institutions, the traders benefited from this agreement by affecting the profitability of the contracts on particular settlement dates. RBS SOF ¶ 82.

197. On April 12, 2013, the DOJ charged RBS with one count of "price-fixing" in violation of Section 1 of the Sherman Act. RBS admitted that it was responsible for the following acts, as charged in the information:

> ROYAL BANK OF SCOTLAND PLC, through its employees, and its coconspirators, engaged in a combination and conspiracy in unreasonable restraint of interstate and foreign commerce. The aforesaid combination and conspiracy consisted of an agreement, understanding and concert of action among the Defendant and its co-conspirators, the substantial terms of which were to fix the price of Yen LIBOR-based derivative products by fixing Yen LIBOR, a key price component of the price thereof, on certain occasions.
>
> In violation of Title 15, United States Code, Section 1.

[126] RBS DPA ¶ 2.

198. In its settlements, RBS agreed that its JPY LIBOR price-fixing conspiracy lasted from at least as early as February 2007 through 2010.[127]

199. RBS's settlement with the CFTC also revealed coordination among the panel banks in setting JPY LIBOR rates. The CFTC reports that an RBS Yen trader "on at least one occasion" asked an interdealer broker "to try to influence other panel banks' Yen LIBOR submissions to benefit the trading positions of" the trader.[128] Later the same day, the interdealer broker informed the RBS Yen trader that the broker had spoken with certain panel banks: "We've, so far we've spoke to [Bank F]. We've spoke to a couple of people so we'll see where they come in alright. We've spoke, basically one second, basically we spoke to [Bank F], [Bank G], [Bank H], who else did I speak to? [Bank I]. There's a couple of other people that the boys have spoke to but as a team we've basically said we want a bit lower so we'll see where they come in alright?"[129] This evidence shows collusion in making JPY LIBOR submissions, and, along with the other evidence presented, strongly suggests such collusion in other currencies, including USD LIBOR, as well.

200. RBS employees have been disciplined or dismissed for their involvement in rigging LIBOR. For example, Andrew Hamilton, a former investment advisor at RBS in London, was

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[127] *See* RBS SOF ¶ 43; *see also* RBS FSA Final Notice ¶ 9 ("Between February 2007 and June 2010, RBS, through two of its Derivatives traders, colluded with Panel Banks and Broker Firms in relation to JPY and CHF LIBOR submissions.").

[128] *In re The Royal Bank of Scotland plc and RBS Securities Japan Limited*, CFTC Docket No. 13-14 (Feb. 6, 2013) ("RBS CFTC Order").

[129] *Id.* at 24.

dismissed by RBS on October 21, 2011. "In total, the misconduct involved at least 21 individuals at RBS, at least one of whom was a Manager."[130]

V. RABOBANK ADMISSIONS

201. On October 29, 2013, Defendant Rabobank agreed to pay approximately $1 billion in fines to settle allegations that it manipulated LIBOR and other benchmark interest rates. This included $325 million to the DOJ and $475 million to the CFTC. In connection with these settlements, the CFTC determined that:

> From at least mid-2005 through early 2011, Rabobank traders engaged in hundreds of manipulative acts undermining the integrity of U.S. Dollar and Yen LIBOR, Euribor and, to a lesser extent, Sterling LIBOR. These violations took various forms [including that] Rabobank traders, some of whom doubled as LIBOR and Euribor submitters, regularly made and accommodated their fellow traders' requests to make favorable rate submissions to benefit their trading positions through attempts to manipulate U.S. Dollar LIBOR and Yen LIBOR and Euribor.[131]

The DOJ made a similar finding, adding that "[n]ot only was [Rabobank's] conduct fraudulent, it compromised the integrity of globally-used interest rate benchmarks—undermining financial markets worldwide."[132]

202. Under a deferred prosecution agreement, Rabobank admitted to a Statement of Facts revealing that like the other panel banks to have reached settlements, it too made LIBOR submissions to benefit its trading positions and failed to report accurately its borrowing costs. As

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[130] RBS FSA Final Notice ¶ 109.

[131] CFTC, Press Release, *Rabobank to Pay $475 Million Penalty to Settle Manipulation and False Reporting Charges Related to LIBOR and Euribor* (Oct. 29, 2013), available at http://www.cftc.gov/PressRoom/PressReleases/pr6752-13.

[132] DOJ Office of Public Affairs, Press Release, *Rabobank Admits Wrongdoing in Libor Investigation, Agrees to Pay $325 Million Criminal Penalty* (Oct. 29, 2013), available at http://www.justice.gov/opa/pr/2013/October/13-crm-1147.html.

an example, on October 17, 2007, a Rabobank swaps trader emailed a USD LIBOR submitter requesting "[a] nice low 1 month for the rest of the week please matey. Cheers." That day, Rabobank's 1-month USD LIBOR submission dropped four basis points, and remained low for the rest of the week. According to the Statement of Facts, complying with requests such as this was a regular part of Rabobank's rate-setting process.

203. Rabobank's manipulation was not limited to USD LIBOR, but included other rates, including JPY LIBOR, Euribor, and Sterling Pound LIBOR. For instance, on August 24, 2007, a trader emailed a JPY LIBOR submitter stating "I would like today's 6m libor lower today mate." The submitter responded: "Ok mate what level do you want mate." The trader instructed his counterpart to enter submissions of "1m 0.78," "3m 0.99," and "6m 1.00." After the JPY submissions and fixing had been published, the trader emailed the submitter: "Ops... sorry that I meant 6m is 1.10…. Not 1.00%. Just bit surprised when I saw our 6m libor price." That day, Rabobank's JPY LIBOR submissions were just as the trader instructed, including a 6-month submission of 1.00% per the trader's mistaken request—a 15 basis point decrease from the previous day.

204. Notwithstanding the erroneous submission, the same trader continued to make these types of requests. On October 17, 2008, for example, he asked a submitter "If possible, could you keep setting 6m libor at 0.80% for a while please?" The submitter's response confirms that Rabobank's manipulation was both systemic and substantial: "Hi mate – oh yes – ***we are now setting all libor significantly under the market levels.***"

205. Submitters were fully aware that the goal of manipulating Rabobank's LIBOR submissions was to influence the final LIBOR fixing. For instance, on January 29, 2009, a submitter noted that he "saw the 6m vs 3m basis collapsing last night," prompting a trader to

gloat "because we lowered 6m libor !" Another trader at Rabobank similarly told a third party at another financial institution that "Sometimes if you want the LIBOR to be set, if you want today's LIBOR at a certain price, your desired number [would be achieved]." The trader further explained: "Well, we are the ones who set [LIBOR]. The recent 97 had been set at 97 due to my wishes. That is obviously . . . that's a little bad . . . Well, anyway, the person with the strongest wishes gets to decide it. Well, this is the way it is."

206. Rabobank created an environment ripe for this type of corruption by assigning traders with LIBOR-based positions to also serve ***as LIBOR submitters***. As an example, on September 19, 2007, one submitter told another that "today i have fixing so am low on the 3mth." That day, Rabobank's 3-month USD LIBOR submission dropped ***39 basis points***. Following its review of internal correspondence such as this, the CFTC concluded: "Submitters were improperly left to choose between their responsibility to make an honest assessment of borrowing costs and their desire to maximize the profitability of their trading positions. Here, Rabobank's submitters often resolved the conflict in favor of profit."

207. Also facilitating rate manipulation was the fact that Rabobank employed submitters with limited knowledge of the rate-setting process and ***no*** training. This enabled traders to exert even more control over LIBOR submissions. In fact, Rabobank submitters often actively sought trader input in the setting process. For example, on January 30, 2009, a submitter asked a trader "any preferences in fixings today?" The trader replied, "6m 0.82% pls," to which the submitter responded, "will do." That day, Rabobank's 6-month JPY LIBOR submission was 0.82, a decrease of 3 basis points from the previous day. Submitters also on occasion allowed traders to make Rabobank's submissions directly.

208. Supervisors at Rabobank were aware of this misconduct, and were even active participants in it. On November 4, 2008, for instance, a trader wrote to three submitters, including Rabobank's Global Head of Liquidity and Finance and the head of Rabobank's money markets desk in London: "Could you set 6m libor at 0.98% today if possible please?" One of the submitters responded: "SURE." That day, Rabobank's 6-month JPY LIBOR submission was set at 0.98%, a decrease of 5 basis points.

209. Rabobank's settlement papers also illustrate the collusion that occurred among panel banks. Until at least October 2008, a Rabobank JPY LIBOR submitter regularly communicated with a submitter at another panel bank about the rates that each would submit for JPY LIBOR. On July 19, 2007, for instance, the outside submitter wrote: "mrng beautiful. . . . if u can would love a low fixing in 3s libor today. . . .[0].77 if poss but just no higher than yest!!" The Rabobank submitter replied: "no prob." On September 25, 2008, the outside trader wrote: "where r u pitching 6 s libor . . . got a fixing." The Rabobank submitter responded: "where would you like me to set it mate?" The outside trader responded: "i need a low one . . . anything and 1 pc would be ok."

210. The same Rabobank submitter similarly colluded with an outside derivatives broker, rigging submissions to benefit the derivatives broker's clients, including UBS. With respect to one fix, the Rabobank submitter commented: "You know, scratch my back, yeah, and all," to which the derivatives broker replied: "Yeah oh definitely, yeah, play the rules." As the Rabobank submitter now admits, there was "deffinite [sic] manipulation . . . i always used to ask if anyone needed a favour and vice versa . . . a little unethical but always helps to have friends in mrkt."

VI. FACTS MADE PUBLIC BY THE EUROPEAN COMMISSION SETTLEMENTS

211. On December 4, 2013, in a press release titled "Antitrust: Commission fines banks € 1.71 billion for participating in cartels in the interest rate derivatives industry,"[133] the European Commission described its settlements with several Defendants relating to their participation in cartels relating to interest-rate derivatives denominated in Euros and Yen.

212. The press release explained that the cartel relating to Euro-denominated interest rate derivatives "aimed at distorting the normal course of pricing components for these derivatives," and that "[t]raders of different banks discussed their bank's submissions for the calculation of EURIBOR as well as their trading and pricing strategies."[134]

213. In published press conference materials from the same day, Joaquín Almunia, the European Commission Vice President responsible for Competition Policy, explained that "we found that the participating banks coordinated with each other to influence the EURIBOR benchmark," which included discussions of "confidential and commercially sensitive information that they are not allowed to share with other market players" and that they "exchanged on their pricing and trading strategies and trading positions."[135] The Defendants in this matter who were involved in this cartel and settled with the European Commission were Barclays, Deutsche Bank, and RBS.

214. The press release also explained that the cartel relating to Yen-denominated interest-rate derivatives "included discussions between traders of the participating banks on

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[133] European Commission, Press Release (Dec. 4, 2013), available at http://europa.eu/rapid/press-release_IP-13-1208_en.htm.

[134] *Id.* at 2.

[135] Joaquín Almunia, *Introductory Remarks on Cartels in the Financial Sector*, (Dec. 4, 2013), at 2, available at http://europa.eu/rapid/press-release_SPEECH-13-1020_en.htm.

certain JPY LIBOR submissions." The traders involved, the release continued, "also exchanged, on occasions, commercially sensitive information relating either to trading positions or to future JPY LIBOR submissions."[136] Mr. Almunia elaborated that this cartel included "discussions between the banks' traders about the upcoming submissions to the panels for the relevant benchmarks . . . . The aim of these talks between traders was to increase their banks' profits and in turn their own bonuses. They also shared commercially sensitive information of the type that competitors normally keep secret."[137] The Defendants in this matter who were involved in this cartel and settled with the European Commission were UBS, RBS, Deutsche Bank, Citi, and JPMorgan.

1. Mr. Almunia noted:

> What is shocking about the LIBOR and EURIBOR scandals is not only the manipulation of benchmarks, which is being tackled by financial regulators worldwide, but also the collusion between banks who are supposed to be competing with each other. Today's decision sends a clear message that the Commission is determined to fight and sanction these cartels in the financial sector. Healthy competition and transparency are crucial for financial markets to work properly, at the service of the real economy rather than the interests of a few.[138]

VII. LLOYDS, LLOYDS TSB HBOS AND BOS ADMISSIONS

215. On July 28, 2014, Lloyds TSB and Lloyds agreed to pay approximately $370 million to settle investigations by U.S. and British authorities into LIBOR-setting misconduct at Lloyds and its affiliates, including Lloyds TSB, HBOS, and the Bank of Scotland plc ("BOS"). In addition, Lloyds agreed to a Statement of Facts pursuant to a Deferred Prosecution Agreement

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[136] European Commission, Press Release (Dec. 4, 2013), at 2.

[137] Almunia at 3.

[138] *Id.* at 4.

with the DOJ, in which Lloyds admitted to improper conduct at BOS and other Lloyds affiliates directed toward the suppression of USD LIBOR during the Class Period. Following the disclosure of the FCA's enforcement actions concerning LIBOR and other benchmark rates against Lloyds TSB and BOS, Mark Carney, the Governor of the Bank of England, stated in a letter to Lloyds' Chairman on July 15, 2014, that "[s]uch manipulation is highly reprehensible, clearly unlawful and may amount to criminal conduct on the part of the individuals involved."

216. The government investigations by the DOJ, CFTC, and FCA identified USD LIBOR-fixing misconduct at Lloyds and several affiliates, including Lloyds TSB, and HBOS and BOS, which Lloyds acquired in early 2009, as well as similar misconduct relating to Sterling LIBOR, Yen LIBOR, and other benchmark rates. The findings relating to USD LIBOR concern two patterns of misconduct: first, consistent suppression of USD LIBOR submissions in order to shore up HBOS's market reputation; and second, opportunistic, profit-driven USD LIBOR manipulation to benefit trading positions at Lloyds TSB, HBOS, and BOS.

217. The investigations focused on BOS because HBOS, which was a USD LIBOR panel bank until February 6, 2009 had made its daily USD LIBOR submissions to the BBA through its subsidiary BOS since September 2007.

218. As noted above, the U.S. and British governments determined that HBOS, through its affiliate BOS, directed USD LIBOR submitters at BOS to falsify their daily submissions to the BBA in order to cover up the extent of HBOS's financial difficulties. As the CFTC found:

> During the global financial crisis in the last quarter of 2008, HBOS, through the acts of its submitters and a manager, improperly altered and lowered HBOS's Sterling and U.S. Dollar LIBOR submissions to create a market perception that HBOS was relatively financially healthy and not a desperate borrower of cash. Specifically, the manager who supervised the HBOS Sterling and U.S. Dollar LIBOR submitters directed the submitters to make LIBOR submissions at the rate of the expected published LIBOR

> so that the bank did not stand out as a material outlier from the rest of the submitting banks. The submitters followed these instructions, making submissions through the end of the year that did not reflect their honest assessment of HBOS's cost of borrowing unsecured interbank funds, and, accordingly, ***were not consistent with the BBA LIBOR definition***.

219. As one example of the misconduct, the CFTC found that on May 6, 2008, an HBOS senior manager sent an e-mail to other HBOS personnel, including a senior manager overseeing the bank's LIBOR submitters, stating that "'in the current environment no bank can be seen as an outlier. The submissions of all banks are published and ***we could not afford to be significantly away from the pack***.'"

220. HBOS management reinforced this directive in September and October 2008, causing USD LIBOR submitters to significantly lower their submissions to the BBA. The FCA found that "in order to avoid negative media comment and market perception about its financial strength, Bank of Scotland manipulated its GBP and USD LIBOR submissions as a result of at least two management directives in September and October 2008." It also found that "[a] total of five individuals at Bank of Scotland were involved in at least two management directives about LIBOR submissions to avoid negative media comment and market perception about its financial strength, and related misconduct, including one Manager and one Senior Manager."

221. Specifically, the CFTC found that senior HBOS management directed the LIBOR submitter to suppress USD LIBOR submissions:

> On September 26, 2008, after discussing the HBOS LIBOR submissions with more senior HBOS managers, the HBOS LIBOR Supervisor told the U.S. Dollar LIBOR Submitter that the U.S. Dollar LIBOR submissions should be lower relative to the other panel members and directed him to reduce the spread between the HBOS U.S. Dollar LIBOR submissions and the submissions of the other panel members.
>
> That same day, the HBOS U.S. Dollar LIBOR Submitter, in a chat with an employee of another financial institution, stated, "you'll like this ***ive been***

> ***pressured by senior management to bring my rates down*** into line with everyone else." Consistent with this directive from the HBOS LIBOR Supervisor, the HBOS U.S. Dollar LIBOR Submitter substantially ***reduced his three-month U.S. Dollar LIBOR submissions by 55 basis points*** on September 26, 2008.

"Accordingly," the CFTC concluded, "from late 2008 through the end of the year, HBOS's U.S. Dollar and Sterling LIBOR submissions did not accurately or solely reflect or relate to HBOS's assessment of the costs of borrowing funds in the relevant interbank markets."

222. In addition to artificially lowering LIBOR submissions to manage its reputation in the market, HBOS also manipulated its LIBOR submissions to benefit its trading positions at the expense of its trading counterparties. The CFTC determined that:

> Before the acquisition of HBOS in January 2009, the Sterling and U.S. Dollar LIBOR submitters at each bank individually altered LIBOR submissions on occasion to benefit the submitters' and traders' cash and derivatives trading positions. Upon the consolidation of the two companies, the submitters, who were located in separate offices, coordinated with one another to adjust LIBOR submissions to benefit their respective trading positions.

223. Both Lloyds TSB and HBOS, through BOS, made their daily USD LIBOR submissions to the BBA through the same money market traders responsible for wholesale funding and hedging activities in that currency. The two banks' lack of effective controls exacerbated this conflict of interest, and enabled trader-submitters to improperly take their trading positions into account when making daily submissions to the BBA.

224. In the Statement of Facts agreed to in connection with its July 28, 2014 Deferred Prosecution Agreement with the DOJ, Lloyds admitted that from at least January 2008 through February 2009, an HBOS employee responsible for USD LIBOR submissions identified as "Submitter-1 ***contributed rates intended to benefit HBOS's trading positions instead of rates that complied with the definition of LIBOR***." The CFTC likewise found that trader-submitters at

Lloyds TSB and BOS "on occasion took their cash and derivatives trading positions into account when determining their U.S. Dollar LIBOR submissions for their respective banks," and "occasionally made false submissions and attempted to manipulate U.S. Dollar LIBOR in order to benefit their trading positions." They did so, the CFTC found, even though "Lloyds TSB and HBOS, through their submitters and traders, ***knew it was improper*** to consider trading positions in determining their banks' LIBOR submissions."

225. In fact, profit-driven misconduct by traders at BOS continued even after Lloyds formally replaced HBOS on the USD LIBOR panel on February 6, 2009. As the CFTC found, "[u]pon the 2009 acquisition, the Lloyds TSB and the former HBOS U.S. Dollar LIBOR submitters . . . discussed their respective trading positions and, on occasion, coordinated on what submissions to make to benefit their trading positions." The FCA likewise concluded that after Lloyds' acquisition of HBOS (and its subsidiary BOS), "USD BoS Traders on the Money Market Desk . . . resorted to making Requests to Lloyds [TSB] Traders asking them to take BoS money market positions into account when making . . . LIBOR submissions." And Lloyds admitted in the DOJ's Statement of Facts that from at least May 2008 through at least May 2009, a submitter at Lloyds TSB contributed rates to benefit Lloyds TSB's "and, after the acquisition, HBOS's trading positions instead of rates that complied with the definition of LIBOR."

226. As Lloyds admitted to the DOJ, after HBOS left the USD LIBOR panel on February 6, 2009, its former USD LIBOR submitter contacted the employee responsible for Lloyds' submissions to devise a scheme to manipulate USD LIBOR submissions to suit the submitter's trading positions.

> For example, on May 11, 2009, Submitter-1 (the former Dollar LIBOR submitter at HBOS, who remained a money-markets trader after the acquisition) wrote to Submitter-2's Assistant: "do u put in the usd libors?"

> Submitter-2's Assistant responded: "yep[,] why my mate? don't you?" Submitter-1 replied: "we got kicked off remember but i used too." Submitter-1 then asked: "***can you put in a lower 1 month today pls cheers***." Submitter-2's Assistant responded: "***hehehe what sort of fixings have you got?***" Submitter-1 replied, "6 yard liability," which referred to a $6 billion borrowing. Submitter-1 later said in the same exchange that he was "being cheeky" to which Submitter-2's Assistant responded: "***hehehe[,] will see what we can do . . . !***" Submitter-1 replied: "was just joking being silly but that being said I will tell you when we have big resets as to be honest ***we shoudl be co ordinating the libor inputs to suit the books*** . for example later this month i have a 5y 3 month liability reset so ***we shoudl put in a low one*** there ill let u know." Submitter-2's Assistant responded: "***of course, that is very sensible.***"

227. Having confirmed the willingness of the Lloyds submitter to improperly manipulate USD LIBOR submissions for pecuniary advantage, the HBOS trader followed up on May 19, 2009 with a specific request for a lower USD LIBOR submission. As the CFTC found:

> [O]n May 19, 2009, the former HBOS former U.S. Dollar LIBOR Submitter contacted the trader who assisted the Lloyds TSB U.S. Dollar LIBOR Submitter and ***specifically requested a lower three-month U.S. Dollar LIBOR submission to benefit his trading position***. The Lloyds TSB U.S. Dollar LIBOR Submitter complied, stating on a telephone call, ***"we got the LIBORs down for you."***

228. The DOJ described this pattern of profit-driven misconduct in a criminal information filed against Lloyds on July 28, 2014, which found that from approximately 2006 through at least 2009, employees of certain Lloyds subsidiaries committed wire fraud as part of "a scheme to defraud counterparties to financial transactions executed on its behalf by secretly manipulating benchmark interest rates to which the profitability of those transactions was tied." In the associated Statement of Facts, Lloyds admitted that "[w]hen [Lloyds TSB] and HBOS submitters . . . contributed rates to benefit their own or others' trading positions, the manipulation of the submissions affected the fixed rates," and that "[e]ven very small movements in the LIBOR fix could have had a significant positive impact on the profitability of

a trader's portfolio, and a correspondingly negative impact on their counterparties' trading positions."

229. Lloyds subsequently fired eight of its employees deemed responsible for the "totally unacceptable behavior identified by the regulators' investigations," and cancelled close to $5 million in bonuses.[139] The article concerning the firings reiterated that U.S and U.K regulators alleged that Lloyds, through then-subsidiary Lloyds TSB Bank PLC, "sent in rigged borrowing cost estimates to the British Bankers' Association."[140]

VIII. ADDITIONAL EVIDENCE OF DEFENDANTS' FRAUD

230. ***As to Barclays, UBS, RBS, Rabobank, Lloyds***, ***Lloyds TSB, HBOS and BOS***, these banks' wrongdoings were detailed at length in their respective regulatory settlements discussed above.

231. ***As to Deutsche Bank,*** Guillaume Adolph was a derivatives trader at Deutsche Bank named in the Canadian Competition Law Officer's affidavit as a trader involved in the manipulation of JPY LIBOR. According to the affidavit, Trader A communicated to Adolph his trading positions, his desire for a certain movement in JPY LIBOR and instructions to get Deutsche Bank to make JPY LIBOR submissions consistent with his wishes, and Adolph agreed to do so. Deutsche Bank's manipulation of JPY LIBOR was part of a broader scheme to benefit its trading positions, including through suppression of USD LIBOR.

232. Deutsche Bank was also implicated in the wrongful termination lawsuit filed by Tan Chi Min, the former head of delta trading for RBS's global banking and markets division in

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[139] Jeff Sistrunk, "Lloyds Fires 8, Axes $4.9 million In Bonuses Over Libor Rigging," *Law 360* (Sept. 29, 2014), at 1.

[140] *Id.* at 2.

Singapore. Those proceedings revealed an August 19, 2007 message from Tan to a trader at Deutsche Bank stating "[i]t's just amazing how Libor-fixing can make you that much money or lose it if opposite." "It is a cartel now in London," Tan added.

233. On July 31, 2012, Deutsche Bank confirmed that certain of its employees improperly manipulated LIBOR. For example, Deutsche Bank discovered that Christian Bittar, the head of its money markets derivatives group, colluded with a trader at Barclays to rig LIBOR. As a proprietary trader, Bittar bet on LIBOR with the bank's own money, and was paid a percentage of his trading profits. The profits Deutsche Bank earned from these bets were substantial. According to the *Wall Street Journal*, Deutsche Bank made $654 million by betting on small changes in LIBOR during 2008. Bittar was suspended and eventually fired for his misconduct. Bittar was reportedly forced to give up €40 million (over $52.1 million) in deferred pay due to his involvement in the LIBOR scandal. Deutsche Bank has dismissed or suspended a total of seven employees due to their roles in rigging LIBOR.

234. As reported by *Bloomberg* on January 22, 2013, Deutsche Bank's co-CEO Anshu Jain told clients and investors during a panel discussion that "[t]he Libor sickens us all. . . . It sickens me the most of all scandals."[141] According to Jain, multiple banks were engaged in wrongdoing related to LIBOR.

235. BaFin, the German financial regulator, has launched an investigation into LIBOR manipulation by Deutsche Bank, as have regulators in the United States, Japan, and Singapore. BaFin President Elke König urged banks involved in the scandal to make "provisions for anticipated losses," and said the magnitude of the manipulations has rendered her speechless. On

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[141] Nicholas Comfort, *Deutsche Bank's Jain Sickened by Libor Manipulation Scandal*, Bloomberg, Jan. 22, 2013.

March 21, 2013, it was reported that BaFin's investigation had exposed "organisational flaws" at Deutsche Bank. BaFin's report is expected to feed into LIBOR-related settlement talks between Deutsche Bank and regulators in the United States and United Kingdom.

236. On September 11, 2013, Deutsche Bank lost a lawsuit filed by four traders whom the bank had dismissed for allegedly violating company policy by manipulating benchmark interest rates. In a recent judgment, the Frankfurt Labor Court chastised the bank for creating an environment that fostered the very misconduct for which it terminated these employees: "It [Deutsche Bank] accuses [traders] of communicating with [other] traders, but has encouraged a close integration of its traders and the people who submit the rates. It criticises a behaviour that it made possible in the first place." The judgment also revealed that Deutsche Bank's traders were *directly* engaged in the submission process. As the court observed: "These functions are incompatible. Traders responsible for taking risks can hardly completely ignore the positions of the bank. They are in a constant conflict of interest, brought about by the bank."

237. Deutsche Bank manipulated LIBOR not only through its own corrupt submission process, but also by colluding with traders at other banks. The U.K. Serious Fraud Office recently identified employees of Deutsche Bank as having conspired with Tom Hayes to manipulate rates. Among the names released was Guillaume Adolph, the Deutsche Bank trader also named in the Canadian Competition Law Officer's affidavit for his involvement in manipulating JPY LIBOR.

238. Deutsche Bank remains under investigation by regulators around the globe for its role in the LIBOR scandal. The bank recently set aside an additional €1.2 billion ($1.6 billion) to cover potential litigation costs, almost wiping out its third quarter profit for 2013.

239. ***As to JPMorgan,*** as discussed above, the bank had a very unbalanced exposure to USD LIBOR (meaning that it stood to pay more on floating –rate instruments than it stood to receive on floating-rate instruments) that benefitted greatly from suppressed USD LIBOR—and thus it is not surprising that the bank was another whose submissions were suspiciously bunched among the lowest ones.

240. Paul Glands and Stewart Wiley were derivatives traders with JPMorgan, who were named in the Canadian Competition Law Officer's affidavit as involved in the manipulation of JPY LIBOR. According to the affidavit, Trader A communicated to the traders his trading positions, his desire for a certain movement in JPY LIBOR and instructions for the traders to get JPMorgan to make JPY LIBOR submissions consistent with his wishes, and the traders agreed to do so. JPMorgan's manipulation of JPY LIBOR was part of a broader scheme to benefit its trading positions, including through manipulation of USD LIBOR. JPMorgan was also among the banks recently sanctioned by the Monetary Authority of Singapore for manipulating benchmark interest rates. JPMorgan was also named in criminal charges recently filed by the U.K. Serious Fraud Office as one of the banks with which Tom Hayes conspired to manipulate LIBOR. In October 2014 JPMorgan was fined $92 million by the European Commission for manipulating the Swiss franc LIBOR.

241. ***As to Bank of America,*** the bank also had a very unbalanced USD LIBOR portfolio, providing it with a powerful incentive to have LIBOR set low. Unsurprisingly, then, as also discussed above, the bank was among those that "bunched" among the lowest submitters, and has been a repeated target of the many ongoing LIBOR probes.

242. On March 17, 2011, *Bloomberg* reported that Bank of America had received subpoenas from the SEC and DOJ regarding its LIBOR setting. Several days later, *Bloomberg*

revealed that Bank of America and several other banks had been asked by regulators "to make employees available to testify as witnesses" in connection with an investigation into LIBOR manipulation.

243. In June 2013, it was reported that Bank of America was required by the Monetary Authority of Singapore to increase its reserves by S$ 700-800 million ($549-627 million) as a sanction for artificially manipulating benchmark interest rates. This development, in addition to Bank of America's bunching and other statistical evidence discussed above, demonstrate that it suppressed its LIBOR submissions during the Class Period.

244. ***As to Citi,*** the bunching behavior described above is particularly suspect given its serious financial problems during the Class Period. On November 21, 2008, for instance, the *Wall Street Journal* reported that Citi executives "began weighing the possibility of auctioning off pieces of the financial giant or even selling the company outright" after the company faced a plunging stock price. The article noted Citi executives and directors "rushing to bolster the confidence of investors, clients and employees" in response to uncertainty about Citi's exposure to risk concerning mortgage-related holdings. On November 24, 2008, *CNNMoney* wrote:

> If you combine opaque structured-finance products with current fair-value accounting rules, almost none of the big banks are solvent because that system equates solvency with asset liquidity. So at this moment Citi isn't solvent. Some argue that liquidity, not solvency, is the problem. But in the end it doesn't matter. Fear will drive illiquidity to such a point that Citi could be rendered insolvent under the current fair-value accounting system.

245. On January 20, 2009, *Bloomberg* reported that Citi "posted an $8.29 billion fourth-quarter loss," completing its worst year, and planned to split in two under CEO Vikram Pandit's plan to rebuild a capital base eroded by the credit crisis. The article further stated, "[t]he problems of Citi, Bank of America and others suggest the system is bankrupt."

246. Despite Citi's financial woes, which necessarily raised its actual borrowing costs, the bank's LIBOR submissions did not appreciably increase. Instead, Citi made low submissions bunched around those of other panel banks.

247. A July 2012 *CNNMoney* article posited "Barclays the biggest Libor liar? No, that may have been Citi."[142] The article observed that Pandit recently had "told analysts not to use Barclays' $450 million LIBOR settlement as a guidepost for what his firm might have to pay." Citing a study showing that "on average Citi understated its borrow[ing] costs by an average of 0.12 percentage points from August 2007 to August 2008," which was "50% more than the 0.08 percentage points that Barclays under report[ed] its own borrowing costs"—the article suggested Citi "might end up paying much more" than Barclays did.

248. Like other panel banks, there is evidence that Citi manipulated not just USD LIBOR, but LIBOR denominated in other currencies. As described above, on December 9, 2011, it was reported that Japan's SESC alleged that CGMJ "employed staffers who attempted to influence" TIBOR "to gain advantage on derivative trades," and recommended that the Japanese prime minister and the head of the Japanese FSA take action against Citi. The SESC specified that Citi's head of G-10 rates and a Citi trader were involved in the misconduct, further stating, "[t]he actions of Director A and Trader B are acknowledged to be seriously unjust and malicious, and could undermine the fairness of the markets." Moreover, the Commission added, "[i]n spite of recognizing these actions, the president and CEO . . . who was also responsible for the G-10 rates, overlooked these actions and the company did not take appropriate measures, therefore, the company's internal control system is acknowledged to have a serious problem."

[142] Stephen Gandel, *Barclays the biggest Libor liar? No, that may have been Citi*, CNNMoney, July 20, 2012.

249. Citi did not deny the SESC's findings. A Citi spokesperson stated, "Citigroup Global Markets Japan takes the matter very seriously and sincerely apologizes to clients and all parties concerned for the issues that led to the recommendation. The company has started working diligently to address the issues raised."

250. Citi later disclosed that on December 16, 2011, the Japanese FSA took administrative action against CGMJ for, among other things, certain communications made by two CGMJ traders about TIBOR. The Japanese FSA issued a business improvement order and suspended CGMJ's trading in derivatives related to JPY LIBOR, as well as Euroyen and Yen-TIBOR from January 10 to January 23, 2012. On the same day, the JFSA also took administrative action against Citibank Japan Ltd. for conduct arising out of Citibank Japan's retail business and also noted that the communications made by the CGMJ traders to employees of Citibank Japan about Euroyen TIBOR had not been properly reported to Citibank Japan's management team.

251. As discussed above, Thomas Hayes was lured from UBS to Citi with a $5 million job offer. According to the Japanese FSA, Hayes proceeded to attempt to pressure colleagues and employees at other banks into manipulating Tibor. For example:

- On March 3, 2010, Hayes told a broker: "i really need a low 3m jpy libor into the imm [the International Monetary Market date, which occurs quarterly on the third Wednesday of March, June, September, and December]," and "any favours you can get with the due at [Bank C] would be much appreciated" "even if he only move 3m down 1bp." The broker said "i'll give him a nudge later, see what he can do" and then asked the Bank C submitter: "u see 3m jpy libor going anywhere btween now and imm?" noting "we have a mutual friend who'd love to see it go down, no chance at all?" The Bank C submitter said "haha TH by chance," and the broker responded "shhh."

- The Hayes-Darin Complaint notes that, the next day, Bank C's 3-month JPY Libor submission decreased by one basis point compared to the

previous day. After the Libor submissions were posted, the Bank C submitter reported back to the broker: "Libor lower ;)," and the broker responded "good work!!!!

- On May 12, 2010, Hayes told a UBS submitter: "libors are going down tonight" "because i am going to put some pressure on people."

252. Christopher Cecere was the head of G10 trading and sales for Asia at Citi. The Japanese FSA found that Cecere "and another Citi trader engaged in 'seriously unjust and malicious' conduct by asking bankers to alter data they submitted while setting a benchmark Japanese lending rate."

253. Brian McAppin was Citi's brokerage head in Japan. According to an article in *The Wall Street Journal*, the Japanese investigation found that he "overlooked" alleged attempts by traders to influence interest rates despite "recognizing these actions."

254. As reported by *Bloomberg*, Citi has "dismissed, put on leave or suspended traders as part of the investigations" into LIBOR manipulation.

255. Citi's manipulation of LIBOR in other currencies was part of a broad scheme to benefit its trading positions and protect its reputation, which, as shown by the facts above, included suppression of its USD LIBOR submissions.

256. ***As to Credit Suisse,*** in February 2012, the bank disclosed that the Swiss Competition Commission had commenced an investigation involving the bank concerning alleged collusive behavior among traders to affect the bid ask spread for derivatives tied to the LIBOR and TIBOR reference rates fixed with respect to certain currencies, and collusive agreements to influence these rates. In October 2012, it was reported that New York Attorney General Eric Schneiderman had issued subpoenas to nine banks, including Credit Suisse, as part of an investigation into LIBOR manipulation. In June 2013, it was reported that Credit Suisse

was sanctioned by the Monetary Authority of Singapore for manipulating benchmark interest rates. This development and the statistical evidence discussed above—including discrepancies between Credit Suisse's LIBOR submissions on the one hand, and other measures of its borrowing costs, such as its probability of default and CDS spreads on the other—demonstrate that Credit Suisse suppressed its LIBOR quotes during the Class Period.

257. ***As to WestLB***, its dire financial circumstances during the Class Period further renders its unduly low LIBOR quotes striking. A September 9, 2008 article in *Spiegel Online* reported that WestLB was "heavily hit as a result of the US sub-prime crisis and the resulting credit crunch. Ill-advised speculation resulted in a 2007 loss of €1.6 billion—leading the bank to the very brink of insolvency." The article reported that in early 2008, a special investment vehicle was set up by WestLB's primary shareholders to "guarantee €5 billion worth of risky investments." The European Commissioner approved the public guarantee but demanded that the bank be "completely restructured to avoid failing afoul of competition regulations." The European Commissioner for Competition later warned that if WestLB did not significantly improve its restructuring package, Brussels would not approve the public assistance that the European Union had already provided to the bank. Further, if that occurred, WestLB would have to pay back €12 billion to the EU.[143]

258. On November 24, 2009, Bloomberg reported that BNP Paribas SA stated "[i]nvestors should buy the euro [ ] on speculation that capital will need to be repatriated to support German bank WestLB AG." Furthermore, two German regional savings bank groups that held a majority stake in WestLB were "prepared to let the Dusseldorf-based lender become

[143] *See* Anne Seith, Germany's WestLB under Attack from Brussels, *Spiegel Online*, Sept. 9, 2008, available at http://www.spiegel.de/international/business/0,1518,druck-577142,00.html.

insolvent" and that "the prospect of insolvency may force state-owned banks and savings banks outside North Rhine-Westphalia, WestLB's home state, to contribute to capital injections." Moreover, Bloomberg reported, WestLB needed "as much as 5 billion euros ($7.5 billion) in capital and may be shut by Nov. 30 unless a solution for its capital needs can be found."[144]

259. On March 16, 2011, the *Financial Times* reported that Bank of America, Citi, and others received subpoenas from U.S. regulators "probing the setting of" USD LIBOR "between 2006 and 2008." The *Times* further noted investigators had "demanded information from" WestLB, and that the previous fall, "all 16 members of the committee that helped the [BBA] set the dollar Libor rate during 2006-08 received informal requests for information."[145].

DEFENDANTS' MOTIVE TO MANIPULATE USD LIBOR

260. The evidence described above confirms that Defendants had powerful motives to suppress USD LIBOR.

261. Throughout the Class Period, Panel Bank Defendants caused the USD LIBOR to be manipulated by knowingly and intentionally submitting false data to Defendant BBA, which did not honestly reflect the submitting banks' actual borrowing costs on the interbank market. Panel Bank Defendants had two reasons to falsify their submissions. First, they did not want to signal their own distress by admitting publicly that their peers were reluctant to lend to them except at elevated rates, particularly as the financial crisis that began to unfold in 2007 brought the banks under increasing scrutiny about their liquidity and creditworthiness. Second, due to their own

[144] *See* Matthew Brown, BNP Says Buy Euro on Speculation WestLB to Be Rescued, Bloomberg, Nov. 24, 2009, available at http://www.bloomberg.com/apps/news?pid=21070001&sid=aI9ZPZShrjWI.

[145] Brooke Masters, Patrick Jenkins & Justin Baer, "Banks served subpoenas in Libor case," FT.com, available at http://www.ft.com/cms/s/0/52958d66-501f-11e0-9ad1-00144feab49a.html#axzz1sJNEDIiI.

net interest rate exposure, certain Panel Bank Defendants stood to reap large financial benefits from even a modest decrease in USD LIBOR.

262. By August 2007, the global credit crisis was just beginning to unfold. Two Bear Stearns hedge funds had blown up, Germany had to bail out IKB Deutsche Industriebank, and the European Central Bank had to inject 95 billion Euros into the European banking system. Globally, banking was becoming increasingly risky, and no bank wanted to appear to be the next to face difficulty. For the USD LIBOR Contributing Panel banks, this was a problem. The BBA published the rates reported by each member of the Contributing Panel. If a Contributing Panel bank admitted that its peers were charging it heightened rates for interbank loans, this would signal to the market that the financial institution was perceived to be risky. In the worst case, fears could snowball and create a run on the bank. Therefore, Panel Bank Defendants had a motive to, and did in fact, falsify the rates that they submitted to give the appearance that their funding costs were lower than they actually were, and to give the appearance that Panel Bank Defendants remained strong despite the deteriorating economic environment.

263. The business press also focused on high USD LIBOR submissions as a sign of distress at submitting banks. For example, in early September 2007, Barclays reported higher USD LIBOR rates than its peers, a Bloomberg article entitled "Barclays Takes a Money-Market Beating" questioned "So what the hell is happening at Barclays and its Barclays Capital securities unit that is prompting its peers to charge it premium interest in the money market?" Other newspapers, including the U.K. Financial Times and The Standard ran similar articles. As another example, an April 23, 2008 Société Générale report questioned the strength of RBS, and noted that RBS had left itself "no capital headroom," and recommended shareholders not invest

further. Later reports noted the "loss of confidence in the bank's ability to continue to operate as a private sector p*layer* . . . In this instance, the shares could have very limited value, if at all."

264. Citi analysts also acknowledged that the Contributing Panel had a motive to misrepresent USD LIBOR quotes.

> [T]he most obvious explanation for LIBOR being set so low is the prevailing fear of being perceived as a weak hand in this fragile market environment. If a bank is not held to transact at its posted LIBOR level, there is little incentive for it to post a rate that is more reflective of real lending levels, let alone one higher than its competitors. Because all LIBOR postings are publicly disclosed, any bank posting a high LIBOR level runs the risk of being perceived as needing funding. With markets in such a fragile state, this kind of perception could have dangerous consequences.[146]

265. And UBS admitted the same motive, as described by the DOJ:

> Because a bank's LIBOR contributions, even if they are not based entirely on actual money market transactions, should correspond to the cost at which the bank perceives that it can borrow funds in the relevant market, a bank's LIBOR contributions may be viewed as an indicator of a bank's creditworthiness. If a bank's LIBOR contributions are relatively high, those submissions could suggest that the bank is paying more than others to borrow funds. Thus, a bank could be perceived to be experiencing financial difficulties because lenders were charging higher rates to that bank.

266. The CFTC found expressly that UBS acted to further this motive: "from approximately August 2007 to mid-2009, UBS, at times, used false benchmark interest rate submissions, including U.S. Dollar LIBOR, to protect itself against media speculation concerning its financial stability during the financial crisis." CFTC UBS Order at 2.[147]

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[146] Peng, et al., "Is LIBOR Broken?," *supra* ¶ 3.

[147] *In re UBS AG and UBS Secs. Japan Co., Ltd.*, CFTC Docket No. 13-09, Dec. 19, 2012, at 2. *See also id.* at 4 ("During the financial crisis, certain UBS managers issued directions for making UBS benchmark interest rate submissions in order to protect against what UBS perceived as unfair and inaccurate negative public and media perceptions about UBS.").

267. Additionally, at least some Panel Bank Defendants had a substantial economic incentive to try to push the aggregate reported USD LIBOR rate lower so that they would have to pay less interest on their own portfolios. Many of the Panel Bank Defendants' portfolios in at least 2007 and 2008 were weighted such that the Panel Bank Defendants financially benefited from reductions in floating interest rates. Defendants had "unbalanced" portfolios, meaning they often stood to pay more on floating-rate instruments than they stood to receive on floating-rate instruments. Suppression of LIBOR, then, would save the panel banks billions. For example, JPMorgan reported significant exposure to rising interest rates in 2009, stating that if interest rates increased by 1%, it would lose over $500 million in revenue.

268. As of September 30, 2008, Deutsche Bank calculated it could gain or lose €68 million ($91.6 million) for every basis point of change in the spread between LIBOR and Euribor, and had similar exposure to changes in the LIBOR "yield curve" (the relationship between short and long-term rates).[148] Deutsche Bank reportedly earned more than $650 million in profit during 2008 from trades tied to LIBOR because LIBOR was lower than predicted by competitive market forces.[149]

269. Similarly, Bank of America reported that it was "liability sensitive to LIBOR" and net interest income would increase substantially if short-term interest rates fell by 100 basis points while long-term rates remained the same.[150] Bank of America's 2007 Annual Report estimated that a 1% drop in USD interest rates would yield a profit of more than $800 million**.**

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[148] Jean Eaglesham, *Bank Made Huge Bet, and Profit, on Libor*, Wall St. J., Jan. 9, 2013.

[149] Jean Eaglesham, *Bank Made Huge Bet, and Profit, on Libor*, Wall St. J., Jan. 10, 2013, http://online.wsj.com/article/SB10001424127887324442304578231721272636626.html.

[150] Bank of America, 2008 Annual Report, 88-90, *available at* http://media.corporateirnet/media_files/irol/71/71595/reports/2008_AR.pdf.

Bank of America further stated that it held a notional amount of more than $50 billion in receive fixed/pay floating interest rate swaps that would mature in 2008 or 2009 with no offsetting pay fixed/receive floating[151] interest rate swaps.[152]

270. In the Form 10-K Annual Report for the Year ending December 31, 2007 that Defendant Citi filed with the Securities and Exchange Commission ("SEC") in early 2008, Citi calculated that it would profit between $540 and $837 million from a 100 basis point (i.e., 1%) decrease in interest rates. In 2009, Citi reported it would make $936 million in net interest revenue if rates would fall by 25 basis points per quarter over the next year and $1.935 billion if rates fell 1%.

271. HSBC Holdings and Lloyds each estimated it stood to earn hundreds of millions more in 2008 and 2009 from low interest rates— or would lose similar amounts from high interest rates. And Deutsche Bank is reported to have earned more than $650 million in trading during 2008 on account of low LIBOR rates.[153]

272. A recent paper by UCLA economics professor Connan Snider and University of Minnesota economics professor Thomas Youle also concludes that bank portfolio exposure to LIBOR – the most popular measure of interest rates in swaps and other derivatives – is a "source

[151] An interest rate swap is a contract in which two parties agree to exchange cash flows for a fixed period of time based on a defined principal amount (known as its notional value). In its simplest form, one counterparty agrees to pay a fixed rate on the notional amount and, in exchange, receives a floating rate on the notional amount.

[152] Bank of America, 2008 Annual Report, *supra* note 144, at Table 42.

[153] *Id.*

of misreporting incentive."[154] Defendants therefore had both reputational and financial motive to manipulate USD LIBOR.

273. These motives were not just reason to submit misleadingly low reports, but to do so through collusion. A single bank's "low" submission may not move the published rate far enough for the banks to make their ill-gotten gains—and may have been excluded from the calculation as an "outlier." And the only way for every Defendant to appear financially strong through low LIBOR submissions without drawing unwanted media and regulatory attention was for all Defendants to collude to suppress as a pack. That is because, on the one hand, a bank that submits LIBOR rates that are above the pack signals its relative weakness and illiquidity to the media and market. As Barclays acknowledged, a bank submitting too high risked sticking its "head above the parapet," which could get it "shot" off by the financial press. Barclays SOF ¶43. Similarly, a HBOS manager who oversaw the falsification of that bank's submissions to the BBA noted, "in the current environment no bank can be seen as an outlier. The submissions of all banks are published and we could not afford to be significantly away from the pack." At the same time, a bank that artificially submitted rates that were noticeably lower than the other panel banks would also risk attention from the media or government regulators that could lead to exposure of its illicit submissions.

274. Absent collusion it would have been in the unilateral self-interest of an individual bank to report that the other banks were artificially suppressing their LIBOR submissions, once the bank learned that was occurring. Such a report would have increased the perceived integrity of the reporting bank, while bringing into serious question the integrity and the financial strength

[154] *See* C. Snider and T. Youle, *Does the LIBOR reflect banks' borrowing costs?*, April 2, 2010, available at www.ssrn.com.

of the banks that were providing false submissions—in other words, such a report would have conferred a significant competitive advantage upon the reporting bank. Because of their collusion, however, no bank reported on any other, meaning that investors like Plaintiffs and the Class were harmed as a result.

PLAINTIFFS' CLAIMS ARE TIMELY

275. Plaintiffs' claims are subject to equitable tolling due to the fraudulent and surreptitious nature of Defendants' misconduct, which Defendants intended to, and did, conceal from Plaintiffs and other investors throughout the Class Period. As a result, Plaintiffs did not discover, nor had reason to discover, the causes of action set forth in this Complaint, until well after the Class Period.

276. Furthermore, Defendants' misconduct constituted a "continuous violation" as defined under the law, such that the limitations periods for Plaintiffs' claims did not accrue until the date of the last wrong or injury that is the subject of this action.

I. DEFENDANTS' MISCONDUCT CONSTITUTED A "CONTINUOUS VIOLATION"

277. Defendants' misconduct occurred and continued on a daily basis with each false submission to the BBA and distribution by the BBA. Each false submission artificially lowered LIBOR, reducing the LIBOR-based payments to which Plaintiffs were entitled. The sustained suppression of LIBOR over a multi-year period inflicted heavy losses on Plaintiffs.

278. The acts of manipulation described herein were not carried out by individuals, but through a conspiracy between and amongst, among others, Defendants. Such collusion was necessary because of the way LIBOR is calculated and has been confirmed by government investigations, as discussed above. Collusion was also necessary in that it kept the panel banks

from engaging in a race to the bottom, and instead allowed them to agree upon a level of suppression that would maintain a façade of reliability for LIBOR as a benchmark. Defendants committed numerous overt acts in furtherance of their conspiracy, including making false submissions to the BBA and actively concealing their misconduct by, among other things, making false or misleading public statements concerning LIBOR.

279. These facts require the tolling of any otherwise-applicable statute of limitations until, at the very earliest, the occurrence of Defendants' last bad act. In actuality, however, any statutes of limitations applicable to Plaintiffs' claims did not begin to run until much later.

II. INQUIRY NOTICE, EQUITABLE TOLLING, AND FRAUDULENT CONCEALMENT

280. Prior to UBS's March 15, 2011 announcement that it had been subpoenaed in connection with the U.S. government's investigation into possible USD LIBOR manipulation, Plaintiffs had not discovered, and could not with reasonable diligence have discovered, that Defendants were engaging in fraudulent misconduct that caused USD LIBOR to be artificially depressed during the Class Period. This is because during the Class Period, Defendants effectively, affirmatively, and fraudulently concealed their wrongful acts from Plaintiffs and the public.

281. Though some market participants voiced concerns in early 2008 that USD LIBOR did not reflect banks' true borrowing costs, Defendants refuted those concerns through a campaign of media propaganda.

A. Defendants' Unlawful Activities Were Inherently Self-Concealing.

282. Defendants' misconduct was, by its very nature, self-concealing, and Defendants made every effort to ensure it remained concealed. Defendants could not expect to suppress USD

LIBOR or hide their own fragility if the general public knew that they were reporting artificially depressed USD LIBOR quotes. Defendants' misrepresentations could only succeed by preventing the public from knowing what they were doing.

283. Regulators have emphasized the secretive nature of Defendants' conspiracy. In its findings against UBS, for example, the FSA stated that: "[t]he misconduct was extensive and widespread" and included "an unquantifiable number of oral requests, which by their nature would not be documented."[155] In fact, traders were strongly encouraged to make their requests verbally, as at UBS, where a submitter who received an internal transmission of a written request complained to the trader's manager that such requests should not be made in writing. UBS SOF ¶ 38. For this same reason, Rabobank grouped submitters on the same desks as traders—so that oral requests to manipulate LIBOR could be made more easily. Rabobank CFTC Order at 2-3.

284. In addition, the facts surrounding Defendants' operations were internal to them. The Panel Bank Defendants' actual borrowing costs were not publicly disclosed, rendering it impossible to discern without internal documents and sophisticated expert analysis the full extent of their fraud. Defendants' LIBOR submissions were not made based on objective metrics observable to market participants. This fact, combined with the general opacity of the interbank loan market and with the highly confusing and unreliable condition of the market during the height of the financial crisis during 2008, made the self-concealing nature of Defendants' scheme all the more pronounced.

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[155] Financial Services Authority, FSA/PN/116/2012, *UBS Fined £160 Million for Significant Failings in Relation to LIBOR and EURIBOR* (Dec. 19, 2012), available at http://www.fsa.gov.uk/library/communication/pr/2012/116.shtml.

285. Additionally, communications among employees of Defendants admitting fraudulent misrepresentation of USD LIBOR rates are only now starting to become available as the result of investigations by the United Kingdom's Financial Services Authority, the United States Department of Justice and Commodity Futures Trading Commission, the Canadian Competition Bureau, and corresponding regulatory bodies in Japan and Singapore.

286. As a result, no person of ordinary intelligence would have discovered, or with reasonable diligence could have discovered before March 15, 2011, facts substantiating an actionable claim against Defendants.

B. Defendants Actively Concealed Their Misconduct And Denied Any Wrongdoing Whenever Concerns Were Sporadically Raised

287. Defendants also engaged in affirmative acts to conceal their misconduct. As a result, even extremely sophisticated market participants were unaware that this misconduct was occurring. As noted at the outset of this Complaint, the former Chairman of the United States Federal Reserve, Alan Greenspan, has commented: "Through all of my experience, what I never contemplated was that there were bankers who would purposely misrepresent facts to banking authorities. You were honor-bound to report accurately, and it never entered my mind that, aside from a fringe element, it would be otherwise."

288. Panel Bank Defendants, in conjunction with Defendant BBA, actively denied the existence of a conspiracy and engaged in a campaign of misinformation to mask the widespread, systematic suppression that was occurring. On August 10, 2007, for instance, the BBA issued a press release explaining that "[c]entral banks (such as the Bank of England, the US Federal

Reserve and the European Central Bank) may fix official base rates monthly, but BBA LIBOR reflects the actual rate at which banks borrow money from each other."[156]

289. On November 29, 2007, a Barclays manager contacted a representative of the BBA to advise that USD "LIBORs are being set lower than where they ought to be" and informed the BBA that this issue applied to all of Panel Bank Defendants. The Barclays manager stated that Panel Bank Defendants were submitting rates that were too low because "banks are afraid to stick their heads above the parapet and post higher numbers because of what happened to [Barclays] when [Barclays] did. You get shot at." The Barclays manager identified certain other Panel Bank Defendants that were submitting LIBOR rates lower than where those banks could actually borrow funds. In order to protect its members, however, the BBA kept this information from the public. It was only released much later, in connection with Barclays' settlement agreements.

290. In late 2007 and early 2008, sporadic concerns arose that the members of the LIBOR panel might be understating their true costs of borrowing, thus causing LIBOR to be set artificially low.

291. Panel Bank Defendants, in conjunction with the BBA, actively denied the existence of a conspiracy and engaged in a campaign of misinformation to mask the widespread, systematic suppression that was occurring.

292. In response to those concerns, the BBA purported to conduct an inquiry regarding LIBOR.

[156] BBA, *Key Facts About BBA LIBOR* (Aug. 10, 2007).

293. Notably, shortly after the BBA announced its investigation in April 2008, the LIBOR panel banks raised their reported rates, causing LIBOR to log its biggest increase since August 2007. Defendants thus falsely and misleadingly signaled that any improper reporting of false rates that may have previously occurred had ended.

294. Subsequently, the BBA falsely stated that LIBOR had not been manipulated, providing false assurance to Plaintiffs and the Class that the concerns expressed by some market participants were unfounded. Defendants and the BBA's concealment are detailed below.

295. The BBA's Foreign Exchange and Money Markets Committee—which was responsible for the functioning and development of LIBOR and counted certain of Panel Bank Defendants among its members—likewise covered up Defendants' fraudulent and collusive scheme. UBS's representative on the Foreign Exchange and Money Markets Committee in 2009, for instance, knew that LIBOR was being rigged but directed employees to "be careful" not to expose Defendants' wrongdoing. On May 19, 2008, the BBA's Foreign Exchange and Money Markets Committee held a meeting, although it officially refused to confirm that fact.[157] According to Bank of England Deputy Governor Paul Tucker, who spoke to Angela Knight of the BBA, the meeting was intended as a "working level pre meeting," but nonetheless the BBA was inclined to conclude that "no change [was] needed substantively, although some recognition of perceptions problem."[158]

296. On June 6, 2008, the *New York Times* reported that the BBA determined at its May 30, 2008 meeting that "there would be no immediate change to the process used to determine [LIBOR]," but instead "all the trade body would commit to was strengthening its oversight of

[157] E-mail from Angela Knight to Paul Tucker (dated May 21, 2008).

[158] E-mail from Paul Tucker to Michael Cross et al. (dated May 28, 2008).

Libor—saying it would give more details in due course."[159] On May 31, 2008, Angela Knight confirmed the results of the meeting for Paul Tucker, explaining that "we merely confirmed existing panels and then said we would be giving details of strengthened governance in due course."[160] The same day, Bank of England Governor Mervyn King informed Tucker and Michael Cross, another Bank of England official, that he believed BBA's general intent to "strengthen[] the oversight of BBA Libor" was a "wholly inadequate" response.[161]

297. On June 5, 2008, Cross sent an e-mail noting that he "sent comments to the BBA . . . (1) urging them to consult on governance and policing and (2) asking them to remove direct and indirect references to the Bank of England from" a forthcoming consultation document.[162] On June 26, 2008, King told Tucker he should "'impress' on the BBA the 'need for greater energy' on the Libor review."[163]

298. Because UBS and other Defendants made a concerted effort to hide their misconduct from regulators and the public, the FSA concluded that the "routine and widespread manipulation of the submissions was not detected by Compliance or by Group Internal Audit," despite five audits of the relevant business area during the Class Period.

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[159] New York Times, *INTERNATIONAL: Libor Process* (June 6, 2008), available at http://www.nytimes.com/2008/06/06/news/06iht-6oxan-LIBOR.13532018.html.

[160] E-mail from Angela Knight to Paul Tucker (dated May 31, 2008).

[161] E-mail to "Governors - GPS" with handwritten notes (dated May 31, 2008). *See also* Jesse Westbook and Gavin Finch, *BOE Wanted Its Name Off Libor Review Over Governance Issues*, Bloomberg (July 20, 2012), available at http://www.bloomberg.com/news/2012-07-20/boe-didn-t-want-its-name-on-libor-review-over-governance-issues.html ("King had said in a note dated May 31 that the BBA's initial proposals seemed 'wholly inadequate.'").

[162] E-mail from Michael Cross to Bill Dudley et al. (dated June 5, 2008).

[163] Westbrook and Finch, *BOE Wanted Its Name Off Libor Review Over Governance Issues*.

299. Defendants also engaged in a media campaign, characterized by the BBA as an "offensive," that was designed to avoid public scrutiny of their LIBOR submissions, particularly after a report was published in the *Wall Street Journal* in April 2008 questioning the accuracy of LIBOR at that time. In nearly every article during 2008 in which the integrity of LIBOR was questioned, a BBA spokesperson was quoted stating the benchmark was valid and reliable.

300. On April 18, 2008, for instance, BBA director John Ewan denied that the rise in LIBOR after publication of the *Wall Street Journal* article was in any way related to increased scrutiny. Instead, Ewan stated that he was "pretty confident" the jump in LIBOR rates "has been an effect of the market moving. . . . It's another stage in the evolution of this extremely strained market that we've been seeing since August last year."[164]

301. On April 21, 2008, for instance, Dominic Konstam of Credit Suisse affirmatively stated the low LIBOR rates were attributable to the fact that U.S. banks, such as Citi and JPMorgan, did not need interbank loans. "Banks are hoarding cash because funding from the asset backed commercial paper market has fallen sharply while money market funds are lending on a short term basis and are restricting their supply." Similarly, Jeffrey Rosenberg, head of credit strategy at Banc of America Securities, stated that variations in LIBOR were the result of the way LIBOR is calculated by the BBA. Specifically, he said that the BBA approach "works when both overall bank risk is low and the dispersion of risks across banks is small . . . [which] is clearly not the case currently." Through statements such as this, Defendants provided then-credible alternative explanations for low LIBOR rates (such as cash hoarding) that were plausible to investors.

[164] Alistair Barr, *Libor Rate Jumps Again as Banking Group Accelerates Reviews*, MarketWatch (Apr. 18, 2008).

302. In an April 28, 2008 interview with the Financial Times, Konstam continued to defend LIBOR's reliability, dismissing concerns that "the rate being manipulated and not representative of the true cost of borrowing" as mere "talk" and "confusion." As a result of these statements, Credit Suisse misled investors to believe that low LIBOR rates were a function of readily available alternative sources of cash, which lessened the need for interbank borrowing, rather than any collusive effort to suppress LIBOR.

303. On May 16, 2008, in response to a media inquiry, JPMorgan misrepresented, "[t]he Libor interbank rate-setting process is not broken, and recent rate volatility can be blamed largely on reluctance among banks to lend to each other amid the current credit crunch."

304. JPMorgan further asserted that differences between LIBOR and other indices at that time could "largely be explained" by limitations that had existed since the inception of the LIBOR in 1984, and stated that the "main limitations of Libor are due more to lack of liquidity in the market rather than any bias in the fixing process." JPMorgan further reported that the composition and "constituents" of the BBA LIBOR Panel consisted of "some of the best known and best capitalized banks in the world." And therefore, "[i]n a market where significant credit tiering is evident, it seems plausible the BBA panel banks could enjoy an advantage in credit costs." The research report further explained the reasons that the "Fed data" differed from LIBOR was owing to the fact that the BBA trims the highest and lowest quartile and averages the remaining rates, whereas the "Fed data is untrimmed and is likely to contain more outlying observations," thus tending to "pull" the Federal Reserve's daily published rate "above the BBA LIBOR level." The same article quotes Colin Withers of Citi assuring the public that LIBOR

remained reliable and emphasizing "the measures we are using are historic -- up to 30 to 40 years old."[165]

305. Other Defendants similarly attributed low LIBOR rates to market forces. An April 2008 UBS report, for example, noted that "we don't even know if contributing banks are mis-pricing LIBOR in the first place. LIBOR could be simply responding to the rise in other market rates." A May 2008 Deutsche Bank report suggested that "Libor has developed different sensitivity to fundamental market risks (liquidity and credit) together with [a] separate idiosyncratic component which has not been as strong in the past."

306. Adding to the confusion was a *Wall Street Journal* article published on May 2, 2008 suggesting that LIBOR was actually too *high*. According to the article, LIBOR "remain[ed] unusually high compared with expected Federal Reserve interest rates, an indication that banks continue to hoard dollars." The *Wall Street Journal* explained that "Fed officials attribute the recent Libor rise to European banks' needing to borrow in dollars, because the pressure tends to slacken around midday in the U.S. when the European day ends" and described steps that the Fed was taking to "reduc[e] tensions in the Libor market."[166]

307. Defendants quickly endorsed the theory that LIBOR was higher than it should be. For example, Terry Belton of JPMorgan posited that uncertainty surrounding the panel banks' credit losses, "along with balance sheet constraints, [wa]s weighing on Libor, leaving many banks anxious about potential future losses" and driving Libor up.

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[165] K. Donovan, J. McGeever, et al., "*European, U.S. bankers work on Libor problems*," reuters.com, available at http://in.reuters.com/article/2008/05/16/markets-rates-bba-idINL162110020080516.

[166] Joellen Perry, Greg Ip & Carrick Mollenkamp, *Central Banks Ponder Dollar-Debt Rate*, Wall Street Journal, May 2, 2008.

308. Defendants continued to make assurances that the panel banks were making accurate submissions. Belton posited that "the Libor fixing process is not broken; BBA Libor broadly reflects the borrowing costs of top tier large banks. . . . The main limitations of Libor are due more to lack of liquidity rather than any bias in the fixing process." Mustafa Chowdhury of Deutsche Bank similarly asserted: "there is little evidence that rate manipulation, if it exists, has been appreciably affecting the LIBOR fixing. . . . Collaboration among a large number of the survey banks to submit non-market-based quotes is also highly unlikely."

309. On May 29, 2008, the *Wall Street Journal* published an article again raising questions about accuracy of LIBOR based on data over a short period in early 2008. That article suggested that one "possibility" might be that some banks had understated their borrowing costs but stopped far short of demonstrating that this was a probability. Rather, as the article acknowledges, "The Journal's analysis doesn't prove that banks are lying or manipulating Libor," and even if the LIBOR data that the banks were submitting in the LIBOR process were in "doubt" or "flawed," various other explanations for the observed data, which did not involve wrongdoing, were accepted at the time to be *at least* just as plausible.

310. One explanation that the *Wall Street Journal* article itself offered for the observed data, which did not involve wrongdoing and which is consistent with explanations expressed by both the U.K.'s FSA and the BBA, is that "since the financial crisis began, banks have all but stopped lending to each other for periods of three months or more, so their estimates of how much it would cost to borrow involve a lot of guesswork."

311. This explanation, considered plausible at the time, considered the "gap" observed in the *Wall Street Journal* article to be a byproduct of "structural issues in the Libor fixing process interacting with the deteriorating market conditions," rather than being the result of any

wrongdoing.[167] At the time, even the U.K.'s financial regulator held the view (even after the May 29, 2008 publication and consideration of *The Wall Street Journal*'s analysis and other analyses during the April and May 2008 time period), that "[t]he combination of deteriorating market conditions and structural issues in the LIBOR fixing process . . . caused dislocation completely independent of any [wrongdoing]."[168]

312. As an additional explanation as to why this analysis did not lead one to conclude that "banks [were] lying or manipulating Libor," *The Wall Street Journal* explained that certain banks "have ample deposits and access to loans from the Federal Reserve, meaning they might not need to borrow at higher rates from other banks."[169]

313. The BBA and Panel Bank Defendants continued their offensive to mislead investors after May 29, 2008. That same day, a BBA spokesman stated: "We have every confidence in the integrity of the BBA Libor-setting process and the accuracy of the figures it produces[.]"[170] As for the panel banks, J.P. Morgan's head of global fixed-income strategy wrote that the *Wall Street Journal*'s "[m]ethodology is based on too high a risk-free rate which produces a large upward bias in the Journal's measure of bank borrowing costs."[171] Citi falsely stated it continued to "submit [its] Libor rates at levels that accurately reflect [its] perception of

[167] *See, e.g.*, FSA, "Internal Audit Report: A Review of the Extent of Awareness within the FSA of Inappropriate LIBOR Submissions" ¶ 28 (2013), available at http://www.fca.org.uk/static/pubs/other/ia-libor.pdf.

[168] *Id.* ¶ 26.

[169] Carrick Mollenkamp & Mark Whitehouse, *Study Casts Doubt on Key Rate*, Wall St. J. (May 29, 2008).

[170] Gavin Finch & Elliott Gotkine, *Libor Banks Misstated Rates, Bond at Barclays Says*, Bloomberg (May 29, 2008).

[171] *Banks May Be Understating Key Lending rate: Report*, Reuters (May 29, 2008), available at http://www.reuters.com/article/2008/05/29/us-banks-liboridUSN2930208320080529.

the market."[172] And HBOS likewise asserted its Libor quotes constituted a "genuine and realistic" indication of the bank's borrowing costs.[173] WestLB insisted that it provided accurate data.[174] All of these representations were false, and were designed to conceal the fact that the Defendants were fraudulently and collusively suppressing USD LIBOR.

314. On June 10, 2008, the BBA published a release titled "Understanding the construction and operation of BBA LIBOR—strengthening for the future," which sought to assure the public of LIBOR's integrity, and to dispel the notion that LIBOR rates were subject to manipulation. The BBA claimed that this paper "represent[ed] the views of the Foreign Exchange and Money Markets Committee, many other members of the BBA and incorporates the overwhelming number of informed comments that the BBA has received." Excerpts of the paper provided:

- "Since its inception in 1985, BBA LIBOR has enjoyed a reputation for accuracy. However, just as the credit crunch has led to stress in the markets, and the breakdown of longstanding correlations in the pricing of assets, as a barometer of these markets, it has also been stressed. This has led to discussion of some of the BBA LIBOR currency fixes—particularly the Dollar fix—within the financial community. This proper discussion ***has overflowed into commentary in the media, and the BBA believes that it needs to correct a number of misunderstandings and misperceptions***." (emphasis added)

- "The dispersion of [LIBOR] rates input by each bank is reflective of the credit conditions facing each bank on a daily basis. For several years therefore the spread between the highest and lowest has been tight as the credit environment was benign. ***An increase in dispersion rates has occurred since August 2007 as a consequence both of the greater credit costs in the bank market since the start of the credit crunch and the lack of liquidity***." (emphasis added)

[172] *Id.*

[173] *Id.*

[174] *Id.*

- "Credit crunch effects have ebbed and flowed on several occasions during the past months which in turn impact the LIBOR fix as it does other indicators. . . . ***These issues relating directly to the current environment will inevitably result in a volatility*** that is today more than that experienced in benign conditions." (emphasis added)

- "***The argument is sometimes made that the U.S. Dollar fixing MUST be too low, otherwise there is apparent arbitrage. This is in fact not correct***. It is simply that the market is no longer offering a cost free arbitrage between the FX swap and cash transactions." (emphasis added)

- "Differences between the London Euro Dollar rate and the domestic U.S. Dollar rates are **a reflection of existing market conditions, not necessarily a distortion in benchmarks**." (emphasis in original)

The BBA also stated that there would be tighter scrutiny of the rates submitted by panel banks, and that any discrepancies in rates would have to be justified.[175]

315. After conducting an investigation, the BBA declared that LIBOR had not been manipulated. On August 5, 2008, the BBA published a "Feedback Statement" on LIBOR, reasserting that "***BBA LIBOR has been the subject of inaccurate and misconceived commentary in some areas of the media and that this needs to be addressed***."[176] The paper concluded that "contributing banks . . . were confident that their submitted rates were 'truly reflective of their perceived borrowing costs,'" and further that "***all contributing banks are***

[175] BBA, *Understanding the Construction and Operation of BBA LIBOR—Strengthening for the Future: A Consultative Paper from the BBA* §§ 2.3, 2.4, 5.1, 6.8, 6.9, 7.3, 7.4, 8.7 (June 10, 2008), available at http://www.bba.org.uk/media/article/bba-announces-steps-to-strengthenlibor.

[176] BBA, *Libor Consultation Feedback Statement* § 2.4 (Aug. 5, 2008), available at http://www.bba.org.uk/media/article/bba-libor-review-consultation-feedback-statement/latestnews (emphasis added).

confident that their submissions reflect their perception of their true costs of borrowing, at the time at which they submitted their rates."[177]

316. The BBA also publicly announced on April 17, 2008 it would expel any panel bank that deliberately submitted inaccurate LIBOR quotes. But it never did so, leading the ordinary person to understand that, during the BBA's review, no bank was found to have been reporting inaccurate LIBOR rates. The same day, the *Wall Street Journal* reported the BBA's announcement that it would conduct an "intensive review" of relevant data, but "the BBA doesn't believe banks have submitted false quotes."[178]

317. Defendants also concealed their misconduct from regulators through outright falsehoods. For example, on March 5, 2008, the FSA asked Barclays what it was paying for funding in certain tenors and currencies. A Barclays manager stated internally that he did not want to disclose that Barclays was borrowing USD "way over LIBOR" and would rather indicate that it was paying a rate equal to LIBOR. A Barclays submitter agreed that if he responded with "the honest truth" it might open a "can of worms." Barclays responded to the FSA that it was paying for twelve-month USD at LIBOR "flat," which was false.

318. Even when regulators began to uncover evidence that Panel Bank Defendants were falsifying their LIBOR submissions, they did not immediately reveal that information to the public. On April 11, 2008, for instance, a Barclays employee told an employee of the New York Federal Reserve that he was aware Defendants were making LIBOR submissions lower than what they were actually paying and that "the ones that need the cash most put in the lowest,

[177] *Id.* § 3.19 (emphasis in original).

[178] Carrick Mollenkamp and Laurence Norman, *British Bankers Group Steps Up Review of Widely Used Libor*, Wall Street Journal (Apr. 17, 2008), available at http://online.wsj.com/news/articles/SB120838284713820833.

lowest rates."[179] The Barclays employee said that Barclays could not borrow money at the rates submitted by other Panel Bank Defendants and that "if we can't borrow money at that rate . . . [t]hen no one else could really . . . . I mean we, you-you know we speak to everyone that everyone else does so . . . [u]m, yeah it's, it's quite, quite an uncomfortable feeling, and . . . I don't know if at some stage LIBORs will correct themselves." This information was not publicly disclosed until July 2012.[180]

319. In a pair of internal audit reports released in March 2013, the FSA confirmed that it actively monitored LIBOR and regularly communicated with the panel banks about their LIBOR submissions throughout the 2007 to 2009 period.[181] During that time, the FSA amassed tens of thousands of emails and other documents relating to the LIBOR submission process. While the vast majority of those documents were not publically available at the time, the FSA kept itself apprised of the *Wall Street Journal* and *Bloomberg* articles from April and May 2008, as well other public documents.[182]

[179] New York Federal Reserve Bank, Unofficial Transcript, ID09274211, at 7 (Apr. 11, 2008), available at
http://www.newyorkfed.org/newsevents/news/markets/2012/libor/April_11_2008_transcript.pdf.

[180] In its recent decision in *Carpenters Pension Trust Fund of St. Louis v. Barclays plc et al.*, 13-2678 (2d Cir. Apr. 25, 2014), the Second Circuit noted Barclays' concession at oral argument that Barclays' June 27, 2012 public disclosure of its settlements with regulators "was the (first) occasion that Barclays disclosed its false 2007-2009 submission rates." *Id.* at 13-14.

[181] Internal Audit Report, A review of the extent of awareness within the FSA of inappropriate LIBOR submissions (March 2013) ("FSA Internal Audit Report"), available at http://www.fsa.gov.uk/static/pubs/other/ia-libor.pdf; FSA Internal Audit report, A review of the extent of awareness within the FSA of inappropriate LIBOR submissions, Management Response (March 2013) ("FSA Management Response"), available at http://www.fca.org.uk/static/documents/fsa-ia-libor-management-response.pdf.

[182] *See* FSA Internal Audit Report at 45-46, 50, 53-54, 56-61, 63, and 72.

320. Despite this abundance of contemporaneous information, the FSA took no action regarding LIBOR until years later. The FSA did not even announce a formal investigation into the rate-fixing process until May of 2010.[183] And the results of the investigation, and the subsequent enforcement actions by the FSA and other regulators, were not known to the public until 2012, when the Barclays, UBS, and other settlements were finally revealed.

321. That the FSA and other regulators did not become fully aware of the Defendants' intentional misconduct until many years after the fact further confirms that investors like Plaintiff, who did not have access to the FSA's volumes of non-public information—stood no chance of gaining such knowledge. Not only did Defendants and the BBA hide the fact that LIBOR was being artificially manipulated, but they also actively misled investors and the public by making false representations about the integrity of the LIBOR fixing process. In 2008, the BBA's "LIBOR Governance and Scrutiny" report stated that "[t]he BBA employs a full time manager to supervise on a day-to-day basis all aspects of LIBOR calculation and dissemination to the marketplace. The LIBOR manager works with a team of professionals both in-house and externally to ensure all processes operate to the highest standards."[184] The report further explained that "Thomson Reuters . . . act[s] as the 'designated distributor' of BBA LIBOR rates. All contributions to the LIBOR rate-setting process are collected by Thomson Reuters, who currently perform[s] checking procedures, supervised by the LIBOR manager, on all the submissions before running the calculation and distributing the fixes." Investors like Plaintiffs had no reason to disbelieve assurances by the BBA that LIBOR was not being manipulated.

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[183] *See* Transcript, House of Commons, Oral Evidence Taken Before the Treasury Committee, July 16, 2012 at Q1085 (MDL No. 2262 Dkt. No. 209-8).

[184] BBA, *LIBOR Governance and Scrutiny* (Dec. 18, 2008), available at http://www.bbalibor.com/download/4025.

C. As a result of Defendants' conduct, no reasonable person could have been on inquiry notice of Defendants' fraud until at the earliest March 15, 2011

322. LIBOR's brief rise in September 2008 and the subsequent creation and expansion of liquidity and bailout facilities in the United States and globally made it difficult or impossible to discern signs of manipulation contemporaneously. Consequently, LIBOR's movements from September 2008 to at least December 2009 were widely accepted as valid and incorporated into government, investor, and academic analyses in reliance on their integrity. For example, through at least December 2009 it was widely accepted that the spread between LIBOR and the OIS during the Class Period was an appropriate index of interbank liquidity risk.

323. A search of the academic literature on LIBOR after September 2008 overwhelmingly returns analyses accepting the integrity of LIBOR during this period. Almost no one suspected that LIBOR had been suppressed after September 2008, let alone by the magnitude now apparent, and certainly not that it was attributable to the type of collusion that has since come to light.

324. Similarly, beginning in October 2008, financial reporting focused extensively on the fact that LIBOR was at historic highs. In light of the fact that LIBOR was at or near record highs, a reasonable investor would not have suspected that banks were actively suppressing LIBOR.

325. Even before that period, an academic study in the respected *BIS Quarterly Review* and published in March 2008 found no evidence of collusion or even manipulation in setting LIBOR using data up to January 2008. A study by Gyntelberg and Wooldridge states:

> If a majority of banks engaged in strategic behaviour, then trimming alone would not have mitigated the impact on the fixing. That said, there is little evidence that this was the case. In the US dollar market, the widening of

> Sibor and H.15 spreads over Libor is consistent with signalling [sic] by Libor contributor banks. However, many of the banks on the US dollar Libor panel are also on the euro Libor panel, and there are no signs that signalling [sic] distorted the latter fixing. Likewise, ***available data do not support the hypothesis that contributor banks manipulated their quotes to profit from positions based on fixings***.

326. Instead the academics conclude: "A deterioration in market liquidity, an increase in interest rate volatility and differences in the composition of the contributor panels were the main causes of the divergence." These academics thus attributed the dislocation in LIBOR to market factors peculiar to the financial crisis and idiosyncratic to the particular reporting banks.

327. In 2009, another academic study published in the *BIS Quarterly Review* also found no evidence of manipulation as late as May 2008. Notably, this study attempted to "extend" the *Wall Street Journal* study to ascertain whether LIBOR manipulation was occurring. Abrantes-Metz *et al.* state:

> On May 29, 2008, the Wall Street Journal (the Journal) printed an article that alleged that several global banks were reporting unjustifiably low borrowing costs for the calculation of the daily Libor benchmark. Specifically, the writers alleged that the banks were reporting costs that were significantly lower than the rates that were justified by bank-specific cost trend movements in the default insurance market. . . .
>
> In this paper, we extend the Journal's study and perform the following analyses: (a) a comparison of Libor with other rates of short-term borrowing costs, (b) an evaluation of the individual bank quotes that were submitted to the British Banker's Association (BBA), and (c) a comparison of these individual quotes to individual CDS spreads and market cap data. We do so during the following three periods: 1/1/07 through 8/8/07 (Period 1), 8/9/07 through 4/16/08 (Period 2), and 4/17/08 through 5/30/08 (Period 3). Furthermore, on April 17, 2008, the Wall Street Journal first published the news that the BBA intended to investigate the composition of these rates.
>
> Individual Libor quotes are analyzed from January 2007 through May 2008, while the level of the Libor itself is studied from 1990 using Bloomberg data sources. After verifying that the patterns are essentially the same for the one month and three month Libor rates, we generally

> restrict our attention to the one month Libor. We also study data on other market indicators, both at aggregate levels and for the individual Libor banks. A few missing days are filled by linear interpolation. Our primary findings are that, while there are some apparent anomalies within the individual quotes, ***the evidence found is inconsistent with an effective manipulation of the level of the Libor*** [emphasis added].

328. The upheaval in the markets, the lack of available data on interbank lending, and in particular the bailout facilities made available to the panel banks were widely understood to be the factors causing interest rates to behave anomalously during the Class Period, as almost every other economic indicator—from the price of crude oil, to the rate of inflation, to the interest rates on short-term deposits—did during the Class Period. Thus, LIBOR was understood to be sending meaningful economic signals about the crisis rather than exhibiting signs of tampering.

329. At no time prior to March 15, 2011 could Plaintiffs have discovered Defendants' fraud or that LIBOR had been manipulated. These revelations surfaced after a year-and-a-half intensive global probe that involved investigators and regulatory authorities from around the world, something that Plaintiffs could not have done on their own. Even today, the full scope of the conspiracy continues to evolve as investigations uncover additional evidence.

330. For years after Defendants' denials were issued, there were virtually no indications that LIBOR manipulation had persisted beyond May 2008. For example, even when government investigations into rate-setting misconduct first came to light, it was universally reported that the inquiry was focused on this early period.[185]

331. In October 2008, the International Monetary Fund published a Global Financial Stability Report in which it noted that "[a]lthough the integrity of the U.S. dollar LIBOR fixing

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[185] Brooke Masters et al. *Big Banks Investigated Over Libor*, Financial Times (Mar. 15, 2011), available at http://www.ft.com/intl/cms/s/0/ab563882-4f08-11e0-9c25-00144feab49a.html.

process has been questioned by some market participants and the financial press, it appears that U.S. dollar LIBOR remains an accurate measure of a typical creditworthy bank's marginal cost of unsecured U.S. dollar term funding."[186]

332. Yet between December 2009 and March 2011 no news reports indicated even a suspicion that LIBOR had experienced continued manipulation. If Plaintiffs should have recognized signs that LIBOR was manipulated in late 2008 and 2009, one would expect there to be at least some discussion in the public record. Instead, virtually no suspicions were aired.

333. Plaintiffs could not have detected Defendants' LIBOR manipulation because the integrity of Defendants' submissions was within their exclusive knowledge: only Defendants could know whether they were accurately reporting the rates at which they could borrow.

D. Defendants' stock prices in relation to questions regarding the accuracy of LIBOR in April or May 2008 confirms that no reasonable person could have known of Defendants' fraud until much later

334. A study was recently conducted by a consulting expert engaged by class-action plaintiffs to determine whether LIBOR panel bank members suffered any significant stock losses in response to articles raising questions about LIBOR's accuracy in April or May 2008. That study, conducted in 2013, demonstrates that the articles did not affect stock prices, confirming that these articles were not in any way sufficient to convey to investors that there was any basis upon which to conclude that panel banks were intentionally suppressing LIBOR, much less in a collusive manner.

335. More specifically, the analysis tested the hypothesis that these articles implied to a person of ordinary intelligence, with at least 50% probability, that LIBOR was being

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[186] International Monetary Fund, *Global Financial Stability Report* (Oct. 2008), available at http://www.imf.org/external/pubs/ft/gfsr/2008/02/pdf/chap2.pdf.

manipulated. The results of the analysis, as described more fully below, are that despite the possible negative financial consequences to the health of the banks, the markets did not react to the 2008 articles and only reacted slightly at most to the March 15, 2011 disclosure by UBS that it had received subpoenas in connection with a LIBOR manipulation by punishing Panel Bank Defendants' stock prices. To the contrary, the only time that the stock prices of the Panel Bank Defendants decreased in a statistically significant way against a baseline index was in June 2012, when Barclays announced its settlement with governmental authorities. The conclusion to draw from this is that the market, composed of highly sophisticated investors, did not seriously contemplate that the Defendants would have any exposure for LIBOR manipulation until June 2012 and consequently were not on inquiry notice of such a probability until that time.

336. The analysis also inquired as to the kind of price reactions that would have occurred if typical market participants thought that LIBOR was manipulated with 50% or higher likelihood. In other words, if the average investor were to expect that a bank had committed a fraud with a 50% or higher likelihood, the average investor would also expect this to impose significant costs on the offending banks such that the stock price of those banks would decline substantially to reflect the 50% or higher likelihood of paying significant damages. Here, the recent settlements of Barclays, UBS, RBS, Rabobank, and Lloyds with regulatory authorities resulted in these defendants collectively paying almost $4 billion for LIBOR manipulation to government regulators alone.

337. The *Financial Times* recently estimated that the currently-held LIBOR linked financial products have about $350 trillion in notional value in 2013. Given these enormous dollar volumes of LIBOR-linked financial products, potential exposure to private claimholders could be many multiples greater than the government settlements. Consequently, if the 2008

articles created an expectation, with at least a 50% likelihood, that banks had engaged in an illegal manipulation scheme with a possible cost of tens of billions of dollars each, the expectation is that each of the banks would suffer substantial stock losses when those articles were published.

338. The analysis conducted a regression of the stock returns for each of the panel banks on the value-weighted stock market index and indicator variables on the dates of each of the 2008 articles as well as on the announcement of the UBS subpoenas in March 2011 and the Barclays settlement in June 2012.

339. If the 2008 articles created an expectation of possible manipulation by Defendants for the average investor, the analysis is expected to show substantial stock price declines for each bank on at least some of the dates after controlling for the overall stock market index. These stock price declines should result in statistically significant negative parameter coefficients for the indicator variables.

340. The results, which have been publicly reported in detail, demonstrate that none of the 2008 articles are associated with any statistically significant negative stock price reactions for any of the Panel Bank Defendants for which stock prices are available. The only exception to this finding is HSBC and Bank of Tokyo on March 16, 2011, when their stock prices declined abnormally at 3% and 4.5% respectively. However, these are the only banks that declined statistically significantly on this date, which is approximately when UBS announced that it was being investigated for LIBOR irregularities.

341. Further, the largest stock price reaction for the panel banks occurred on June 28, 2012, just after the $453 million Barclays settlement was publicly announced. In reaction to this announcement, Barclays' stock price suffered a decline of almost 12%, resulting in a market cap

decline of about $4.5 billion in a single day. This stock price drop exceeded the settlement fine by about ten-fold, indicating likely additional future costs for Barclays such as settlements with private claimholders. RBS also declined by a statistically significant 9.4% on June 28, 2012. The other panel banks collectively suffered a statistically significant 2.97% abnormal stock price decline on this day, thus recognizing some of the implications of the Barclays settlement for the other panel members at this time.

342. Thus, this objective statistical evidence demonstrates that none of the 2008 articles changed the expectations of the ordinary investor.

E. That the U.S. and U.K governments continued to rely on LIBOR in 2008 and beyond further confirms that the 2008 articles did not alert a reasonable person to the Fraud

343. Both the U.S. and U.K. governments continued to rely on LIBOR in 2008 and throughout the Class Period.

344. As an example, in July 2008, the U.K. Treasury utilized LIBOR in connection with its Special Liquidity Program despite evidence that 3-month LIBOR was declining. That it continued to do so after articles suggesting suppression indicates that the Treasury had faith in LIBOR despite sporadic speculation concerning its accuracy.

345. In late 2008, the U.S. Treasury caused the terms of Treasury-supported Small Business Administration loans to change from "Prime, a domestic interest rate, to LIBOR." The U.S. Treasury also extended billions of dollars of loans on which it received LIBOR-based interest payments:

- On December 31, 2008, the U.S. Treasury agreed to lend General Motors Corporation $13.4 billion based on "LIBOR +3%."
- On January 2, 2009, the U.S. Treasury agreed to lend Chrysler Holding LLC $4 billion based on "3% or 8% (if the company is in default of its

terms under the agreement) plus the greater of a) three-month LIBOR or b) LIBOR floor (2.00%)."

- On January 16, 2009, the U.S. Treasury agreed to lend General Motors $884 million based on "LIBOR +3%."

- On January 16, 2009, the U.S. Treasury agreed to lend Chrysler Financial $1.5 billion based on "LIBOR + 1% for first year[,] LIBOR + 1.5% for remaining" term.

346. Beginning in the second quarter of 2009, the FDIC, Federal Reserve and Treasury agreed to extend LIBOR-based loans to financial institutions through TARP's Public-Private Investment Program for Legacy Assets ("PPIP").

347. During the period 2009-10, the U.K. Treasury issued LIBOR-based loans to the Financial Services Compensation Scheme, which was established to repay the depositors of failed banks.

348. In her July 2010 Quarterly Report to Congress, the TARP Inspector General explained that most TALF loans were tied to LIBOR, "a generally accepted short-term interest rate standard."

349. The above examples demonstrate that, given the continuing reliance on LIBOR by the U.S. and U.K. governments, a reasonable investor would not have concluded that LIBOR was being actively suppressed.

350. Throughout the Class Period, Plaintiffs diligently sought to protect their investment interests, including by analyzing the loans in question and their performance. Despite the exercise of active and reasonable diligence, however, Plaintiffs could not and did not uncover Defendants' misconduct due to the self-concealing nature of their scheme and their active efforts to hide it from the public. For these reasons, any statute of limitations affecting or limiting the rights of action by Plaintiffs was equitably tolled.

PLAINTIFFS SUFFERED SIGNIFICANT HARM AS A RESULT OF DEFENDANTS' MISCONDUCT

351. Throughout the Class Period, Defendants' manipulation of LIBOR caused damage to Plaintiffs and the Class by artificially depressing the value of billions of dollars in LIBOR-based financial instruments they purchased, held or sold.

352. Plaintiffs engaged in numerous financial transactions involving products that incorporated USD LIBOR. Throughout the Class Period, Plaintiffs issued and ultimately resold floating-rate instruments indexed to USD LIBOR. These obligations paid a rate of return based on USD LIBOR; specifically, they paid USD LIBOR plus an additional fixed rate of return.

353. Defendants' suppression of LIBOR caused Plaintiffs to receive lower returns on these obligations than they would have if LIBOR had been properly set, which was a foreseeable result of Defendants' misconduct. Plaintiffs relied on the accuracy of LIBOR in undertaking these transactions. Moreover, upon the sale of these loans, Plaintiff received a lower sale price as the premium discount rates for the loans were lower as a result of the suppression of LIBOR, thereby deflating the value of the loan. As a result of Defendants' manipulation of LIBOR, Plaintiffs received less money than they otherwise would have. As a direct and proximate result of Defendants' wrongful conduct as described in this Complaint, Plaintiffs have been injured in their business and property and have suffered damages in an amount presently undetermined.

CLASS ACTION ALLEGATIONS

354. Plaintiffs bring this action as a class action pursuant to Federal Rule of Civil Procedure 23(a) and (b)(3) on behalf a Class of all lending institutions headquartered in the United States, including its fifty (50) states and United States territories, that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates

tied to USD LIBOR, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

355. The members of the Class are so numerous that joinder of all members is impracticable. Throughout the Class Period, there were more than ten thousand (10,000) banks, savings & loan institutions and credit unions headquartered in the United States. Plaintiffs are informed and believe, consistent with standard banking practices, that most banks, savings & loan institutions and credit unions located within the United States offered or purchased loans with interest rates tied to USD LIBOR, and were therefore injured by Defendants' unlawful suppression of USD LIBOR rates. Potential class members can be readily ascertained from regulatory records, and may be notified of the pendency of this action by mail, using the form of notice similar to that customarily used in class actions.

356. Plaintiffs' claims are typical of the claims of the members of the Class as all members of the Class are similarly affected by Defendants' wrongful conduct complained of herein.

357. Plaintiffs will fairly and adequately protect the interests of the members of the Class and have retained counsel competent and experienced in class litigation and knowledgeable about the financial services industry. Plaintiffs have no interests antagonistic to or in conflict with those of the Class.

358. Common questions of law and fact exist as to all members of the Class and predominate over any questions solely affecting individual members of the Class. Among the questions of law and fact common to the Class are:

- whether each Panel Bank Defendant submitted false USD LIBOR quotes during the Class Period;
- whether BBA published false USD LIBOR rates during the Class Period
- the scope and duration of Defendants' manipulation of USD LIBOR
- whether defendants conspired or agreed to suppress, fix, maintain, stabilize or otherwise manipulate USD LIBOR
- whether Defendants intended to induce reliance upon any misrepresented quotes/rates;
- whether it was foreseeable that misrepresentation of USD LIBOR quotes/rates would reduce interest income, and therefore cause injury to, lenders that originated or purchased loans adjusted in reference to USD LIBOR rates; and
- the amount by which misrepresented USD LIBOR quotes artificially depressed the USD LIBOR fix during the Class Period.

359. The common law of the State of New York can be applied to the claims of all Class members because there is no actual conflict between the common law tort of fraud under the law of the State of New York and the laws of other states and territories. Alternatively, the common law of the State of New York can be applied to the claims of all Class members because no state or territory has a greater interest in regulating the conduct alleged in this Complaint. Specifically, the State of New York has a greater aggregation of the defendant banks, both in terms of presence and headquarters, than any other state or territory, and the fraudulent LIBOR quotes that form the basis of this action are believed to have emanated for at least two of the Defendants, JPMorgan and Citi, within the State of New York.

360. In the event that there is an actual conflict between the laws of the State of New York and other states or territories, and the laws of other states or territories are deemed to apply to the claims of certain Class members, such claims can be asserted by the following subclasses:

a) "Alabama State Subclass":

All lending institutions either headquartered in Alabama, that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Alabama, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

b) "Alaska State Subclass":

All lending institutions either headquartered in Alaska that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Alaska, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant,

the members of their immediate families and their legal representatives, heirs, successors or assigns.

c) "American Samoa Subclass":

All lending institutions either headquartered in American Samoa that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in American Samoa, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

d) "Arizona State Subclass":

All lending institution either headquartered in Arizona that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Arizona, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant,

the members of their immediate families and their legal representatives, heirs, successors or assigns.

e) “Arkansas State Subclass”:

All lending institutions either headquartered in Arkansas that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Arkansas, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

f) “California State Subclass”:

All lending institutions headquartered in California that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in California, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal

representatives, heirs, successors or assigns.

g) "Colorado State Subclass":

All lending institutions either headquartered in Colorado that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Colorado, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

h) "Connecticut State Subclass":

All lending institutions either headquartered in Connecticut that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Connecticut, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

i) "Delaware State Subclass":

All lending institutions either headquartered in Delaware that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Delaware, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

j) "District of Colombia Subclass":

All lending institutions either headquartered in the District of Columbia that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in the District of Columbia, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

k) "Florida State Subclass":

All lending institutions either headquartered in Florida that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Arizona, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

l) "Georgia State Subclass":

All lending institutions either headquartered in Georgia that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Georgia, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

m) "Guam Subclass":

All lending institutions either headquartered in Guam that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Guam, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

n) "Hawaii State Subclass":

All lending institutions either headquartered in Hawaii that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Hawaii, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

o) "Idaho State Subclass":

All lending institutions either headquartered in Idaho that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Idaho, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

p) "Illinois State Subclass":

All lending institutions either headquartered in Illinois that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Illinois, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

q) "Indiana State Subclass":

All lending institutions either headquartered in Indiana that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Indiana, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

r) "Iowa State Subclass":

All lending institutions either headquartered in Iowa that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Iowa, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

s) “Kansas State Subclass”:

All lending institutions either headquartered in Kansas that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Kansas, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

t) “Kentucky State Subclass”:

All lending institutions either headquartered in Kentucky that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Kentucky, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

u) "Louisiana State Subclass":

All lending institutions either headquartered in Louisiana that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Louisiana, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

v) "Maine State Subclass":

All lending institutions either headquartered in Maine that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Maine, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

w) "Maryland State Subclass":

All lending institutions either headquartered in Maryland that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Maryland, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

x) "Massachusetts State Subclass":

All lending institutions either headquartered in Massachusetts that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Massachusetts, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

y) "Michigan State Subclass":

All lending institutions either headquartered in Michigan that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Michigan, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

z) "Minnesota State Subclass":

All lending institutions either headquartered in Minnesota that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Minnesota, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

aa) "Mississippi State Subclass":

All lending institutions either headquartered in Mississippi that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Mississippi, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

bb) "Missouri State Subclass":

All lending institutions either headquartered in Missouri that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Missouri, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

cc) "Montana State Subclass":

All lending institutions either headquartered in Montana that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Montana, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

dd) "Nebraska State Subclass":

All lending institutions either headquartered in Nebraska that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Nebraska, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

ee) “Nevada State Subclass”:

All lending institutions either headquartered in Nevada that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Nevada, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

ff) “New Hampshire State Subclass”

All lending institutions either headquartered in New Hampshire that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in New Hampshire, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

gg) “New Jersey State Subclass”:

All lending institutions either headquartered in New Jersey that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in New Jersey, rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

hh) “New Mexico State Subclass”:

All lending institutions either headquartered in New Mexico that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in New Mexico, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

ii) "New York State Subclass":

All lending institutions either headquartered in New York that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in New York, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

jj) "North Carolina State Subclass":

All lending institutions either headquartered in North Carolina that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in North Carolina, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

kk) "North Dakota State Subclass":

All lending institutions either headquartered in North Dakota that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in North Dakota, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

ll) "Northern Marianas Islands Subclass":

All lending institutions either headquartered in the Northern Marianas Islands that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in the Northern Marianas Islands, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

mm) "Ohio State Subclass":

All lending institutions either headquartered in Ohio that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Ohio, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

nn) "Oklahoma State Subclass":

All lending institutions either headquartered in Oklahoma that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Oklahoma, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

oo) “Oregon State Subclass”:

All lending institutions either headquartered in Oregon that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Oregon, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

pp) “Pennsylvania State Subclass”:

All lending institutions either headquartered in Pennsylvania that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Pennsylvania, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

qq) "Puerto Rico Subclass":

All lending institutions either headquartered in Puerto Rico that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Puerto Rico, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

rr) "Rhode Island State Subclass":

All lending institutions either headquartered in Rhode Island that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Rhode Island, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

ss) "South Carolina State Subclass"

All lending institutions either headquartered in South Carolina that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in South Carolina, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

tt) "South Dakota State Subclass":

All lending institutions either headquartered in South Dakota that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in South Dakota, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

uu) "Tennessee State Subclass":

All lending institutions either headquartered in Tennessee that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Tennessee, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

vv) "Texas State Subclass:

All lending institutions either headquartered in Texas that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Texas, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

ww) "Utah State Subclass":

All lending institutions either headquartered in Utah that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Utah, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

xx) "Vermont State Subclass":

All lending institutions either headquartered in Vermont that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Vermont, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

yy) "Virginia State Subclass":

All lending institutions either headquartered in Virginia that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Virginia, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

zz) "Virgin Islands Subclass":

All lending institutions either headquartered in the U.S. Virgin Islands that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled the U.S. Virgin Islands, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

aaa) “Washington State Subclass”:

All lending institutions either headquartered in Washington that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled Washington, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

bbb)“West Virginia State Subclass”:

All lending institutions either headquartered in West Virginia that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans in loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in West Virginia, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

ccc) "Wisconsin State Subclass":

All lending institutions either headquartered in Wisconsin that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Wisconsin, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

ddd) "Wyoming State Subclass":

All lending institutions either headquartered in Wyoming that originated loans, held loans, purchased whole loans, purchased interests in loans or sold loans with interest rates tied to USD LIBOR, or headquartered in any other state or territory within the United States that owned or held interests in such loans issued to individuals or entities located and/or domiciled in Wyoming, which rates adjusted at any time between August 1, 2007 and May 31, 2010, both dates inclusive. Excluded from the Class are Defendants herein, and any businesses controlled or majority-owned by any Defendant or the officers and directors of any Defendant, the members of their immediate families and their legal representatives, heirs, successors or assigns.

361. A class action is superior to all other available methods for the fair and efficient adjudication of this controversy since joinder of all members is impracticable. Furthermore, as the damages suffered by individual Class members may be relatively small, the expense and burden of individual litigation make it impossible for members of the Class to individually redress the wrongs done to them. There will be no difficulty in the management of this action as a class action, and any individual issues related to the nature of each Class member's loans can be ascertained in the normal course of a claims process.

CLAIMS FOR RELIEF

COUNT I: FRAUD

(Against All Defendants)

362. Plaintiffs re-allege each and every allegation contained above as if fully set forth herein.

363. This Count is asserted against all Defendants under the common law tort of fraud. During the Class Period, Panel Bank Defendants each submitted materially false USD LIBOR quotes to the BBA, with the intent and understanding that those bids would become part of the USD LIBOR fix calculated by the BBA and widely disseminated to the financial services industry. Panel Bank Defendants' false USD LIBOR submissions succeeded in artificially depressing the reported USD LIBOR fix throughout the Class Period. The BBA knowingly caused the materially false USD LIBOR fix to be published to the financial services industry.

364. Each Defendant owed a duty to Plaintiffs to honestly and accurately report USD LIBOR and not to intentionally mislead Plaintiffs and others by secretly and collectively. manipulating LIBOR for their gain and to the detriment of others in the financial markets. Defendants' duty arose from representations they made, individually and/or through the BBA,

that LIBOR was a reliable indicator of the state of the money markets, that LIBOR was a reliable barometer of risk, that LIBOR reflected competitive rates in the London interbank lending market, and other such public representations.

365. As described above, beginning in August 2007 and continuing through at least May 2010, each Defendant falsely represented on a daily basis that (i) Panel Bank Defendant's USD LIBOR submissions were consistent with the published definition of LIBOR; (ii) Panel Bank Defendant based its USD LIBOR submissions on Panel Bank Defendant's honest perception of its cost of funds in the London interbank market without reference to rates submitted by other Panel Bank Defendants; and (iii) Panel Bank Defendant's USD LIBOR submissions represented the actual competitive rates at which Panel Bank Defendant honestly believed another bank would offer it funds in the London interbank market.

366. Defendants made those representations knowing they were false, or with reckless disregard for their truth, as Panel Bank Defendants knowingly or recklessly made daily USD LIBOR submissions to the BBA that did not reflect Panel Bank Defendants' true costs of borrowing but instead reflected Panel Bank Defendants' scheme to unlawfully manipulate LIBOR.

367. Defendants never disclosed to Plaintiffs the inaccuracy of the Panel Bank Defendants' quotes to the BBA or that Defendants had manipulated LIBOR to cause it to be lower than it should have been.

368. The inaccuracy of Panel Bank Defendants' reported quotes, and Defendants' scheme to manipulate LIBOR, were material facts of which Plaintiffs were unaware. If Defendants had disclosed those facts, Plaintiffs would not have purchased the subject financial instruments or at least would have demanded appropriately higher interest rates on those

instruments. Plaintiffs relied on the accuracy of Panel Bank Defendants' quotes, on the integrity and accuracy of LIBOR, and on the other statements by Defendants that did not include these material omissions.

369. Defendants each had actual knowledge of the falsity of their USD LIBOR quotes during the Class Period, because each Panel Bank Defendant knew that their USD LIBOR quotes were less than the actual rates at which they could borrow funds of a reasonable size in the interbank market, and were less than the rates at which Panel Bank Defendants actually borrowed funds in the interbank market. In the alternative, Defendants recklessly disregarded the falsity of the Panel Bank Defendants' USD LIBOR quotes during the Class Period.

370. Defendants recognized the importance of USD LIBOR and falsely and publicly held it out as a trustworthy benchmark. In doing so, Defendants intended to induce reliance upon their misrepresentations. Indeed, the *only* reason that Panel Bank Defendants submitted USD LIBOR quotes to the BBA was for the inclusion of those quotes in the calculation of the BBA's daily USD LIBOR fix and dissemination of their individual quotes and the aggregated fix to financial markets. As participants in the financial services industry, Defendants each had actual knowledge of the commonly-known uses of USD LIBOR, including its use to set interest rates in residential in commercial mortgages. Indeed most transacted regularly in loans tied to USD LIBOR.

371. Plaintiffs and the Class did in fact detrimentally rely upon Defendants' misrepresentations, by calculating interest due from borrowers based upon the fraudulently suppressed USD LIBOR rates and therefore collecting less interest than they would have received had Panel Bank Defendants submitted honest USD LIBOR quotes, and not caused USD LIBOR to be artificially suppressed. The reliance of Plaintiffs and the Class upon the integrity

of Panel Bank Defendants' USD LIBOR quotes was both justifiable and reasonable, in that it was consistent with the norms of the financial services industry throughout the Class Period and encouraged by Defendants.

372. Additionally, as a result of Defendants' omission of material fact in connection with representations made to Plaintiffs, Plaintiffs are entitled to an inference or presumption of reliance.

373. Defendants' concealment of the inaccuracy of their reported quotes and their scheme to manipulate LIBOR damaged Plaintiffs because Plaintiffs received lower returns (i.e., lower interest rates) than they would have had LIBOR been accurately and honestly set, or had Plaintiffs purchased financial instruments not paying interest as a function of LIBOR.

374. Plaintiffs and the Class were injured as a result of Defendants' scheme because they were unable to collect the full measure of interest income to which they were entitled, and would have received but for Defendants' fraud.

375. The injuries sustained by Plaintiffs and the Class were proximately caused by Defendants' misconduct. They were the foreseeable and direct result of Panel Bank Defendants' submissions of false USD LIBOR quotes to the BBA and the BBA's dissemination of false USD LIBOR. Because of the mechanical nature of the BBA's calculation, Panel Bank Defendants' false submissions necessarily had an impact on USD LIBOR fixes during the Class Period, and had to affect loans tied to USD LIBOR rates. Defendants had actual knowledge of this connection, due to the Panel Bank Defendants' own transactions in USD LIBOR-tied loans and their analyses of credit markets and financial services firms, and would certainly have understood that falsifying USD LIBOR quotes would impact adjustable rate loans issued by other lenders.

COUNT II: CIVIL CONSPIRACY TO COMMIT FRAUD

(Against All Defendants)

376. Plaintiffs re-allege each and every allegation contained above as if fully set forth herein.

377. As set forth above, Defendants, either expressly or tacitly, reached a common agreement, plan or design to suppress USD LIBOR and submitting false USD LIBOR rates that were inconsistent with the public definition of LIBOR, below their actual borrowing costs, and within a narrow range among the Panel Bank Defendants, as well as by engaging in a course of material misrepresentations and/or omissions to conceal the fraudulent acts. Each Defendant agreed to the scheme with actual knowledge of the unlawful plan to suppress LIBOR.

378. Defendants each intentionally and knowingly committed numerous acts in furtherance of this agreement, including submitting false LIBOR quotes to the BBA throughout the Class Period (and the BBA's dissemination) and actively concealing their misconduct, including by making false or misleading public statements concerning LIBOR, its integrity and its accuracy.

379. Through their misconduct in artificially suppressing LIBOR during the Class Period, Defendants defrauded Plaintiffs and other investors in LIBOR-based financial instruments.

380. Defendants' conspiracy harmed Plaintiffs by causing them to receive lower returns on LIBOR-based financial instruments and/or to overpay for such instruments.

381. Accordingly, each Defendant is being sued both individually as a primary violator of the law, as stated in this Complaint, and as a co-conspirator as provided for under state law.

As a co-conspirator, each Defendant is jointly and severally liable for the torts committed by its fellow Defendants.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs demand judgment against Defendants as follows:

A. Determining that the instant action may be maintained as a class action under Rule 23 of the Federal Rules of Civil Procedure, and certifying the Class described herein;

B. Certifying Plaintiffs as the Class representatives and certifying Plaintiffs' Counsel, Pomerantz LLP, as Class Counsel;

C. Awarding compensatory damages in favor of Plaintiffs and the other class members against all Defendants, jointly and severally, for all damages sustained as a result of Defendants' wrongdoing, in an amount to be proven at trial, including interest thereon;

D. Awarding Plaintiffs and the other members of the Class punitive damages of sufficient magnitude to discourage Defendant banks from future misconduct;

E. Awarding prejudgment and post-judgment interest, as well as reasonable attorneys' fees, expert fees and other costs; and

F. Awarding such other equitable, injunctive or other relief as this Court may deem just and proper.

DEMAND FOR TRIAL BY JURY

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiffs hereby demand trial by jury of all issues that may be so tried.

Dated: April 18, 2016

Respectfully Submitted,

POMERANTZ LLP

/s/ Jeremy A. Lieberman

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Counsel for Plaintiffs and the Class

APPENDIX A

Figure A-1: Federal Reserve Eurodollar Spread for HSBC USD LIBOR Submissions

Figure A-2: Federal Reserve Eurodollar Spread for JPMorgan USD LIBOR Submissions

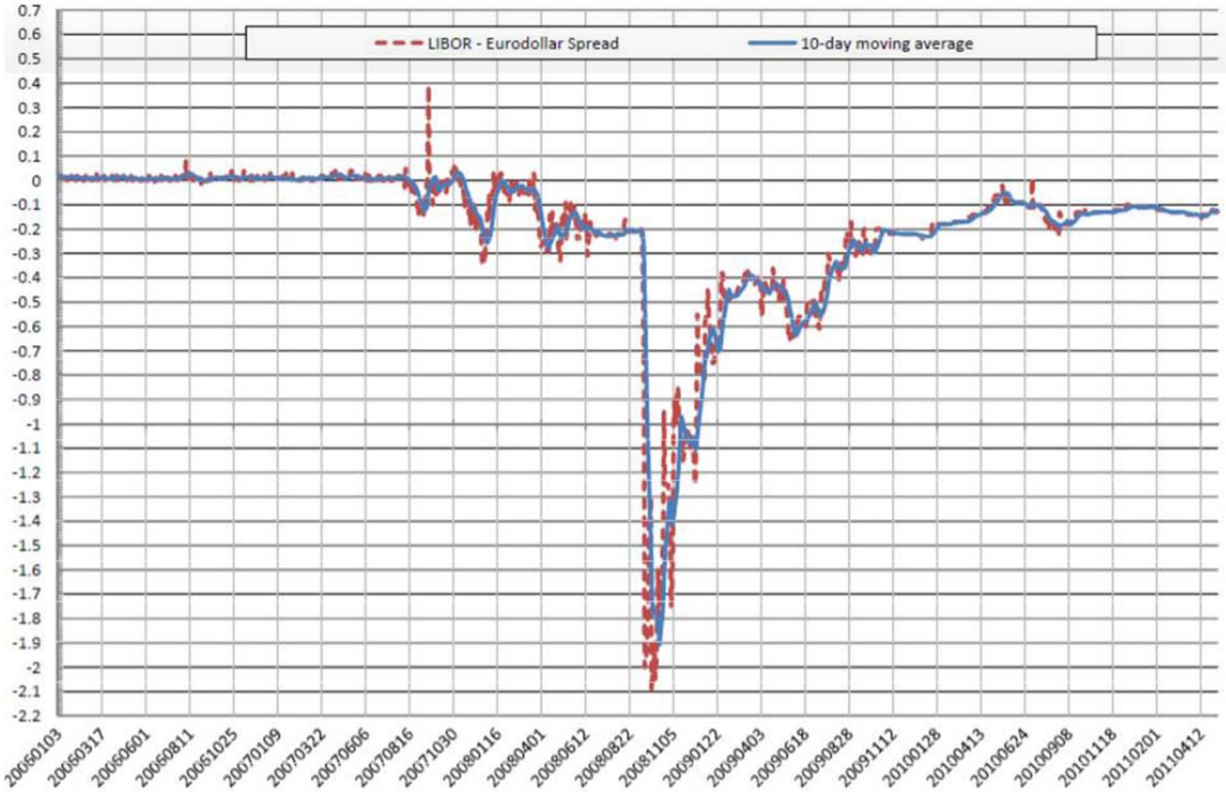


Figure A-3: Federal Reserve Eurodollar Spread for Barclays USD LIBOR Submissions

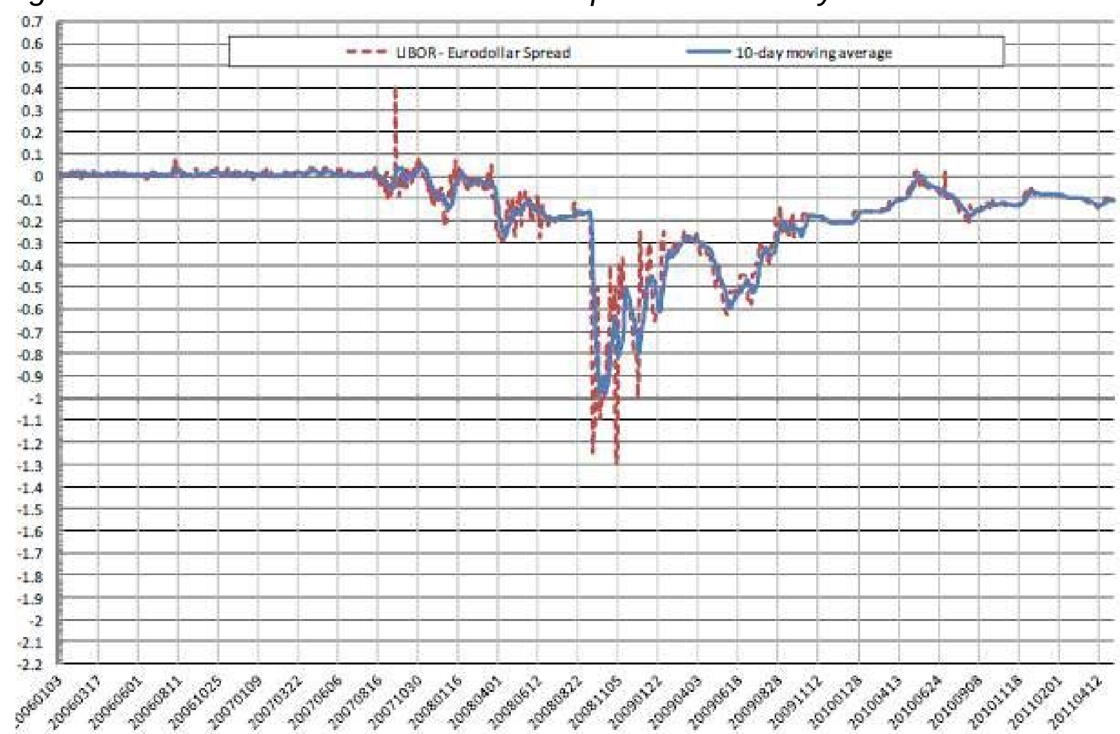


Figure A-4: Federal Reserve Eurodollar Spread for Deutsche Bank USD LIBOR Submissions

Figure A-5: Federal Reserve Eurodollar Spread for RBS USD LIBOR Submissions

Figure A-6: Federal Reserve Eurodollar Spread for Citi USD LIBOR Submissions

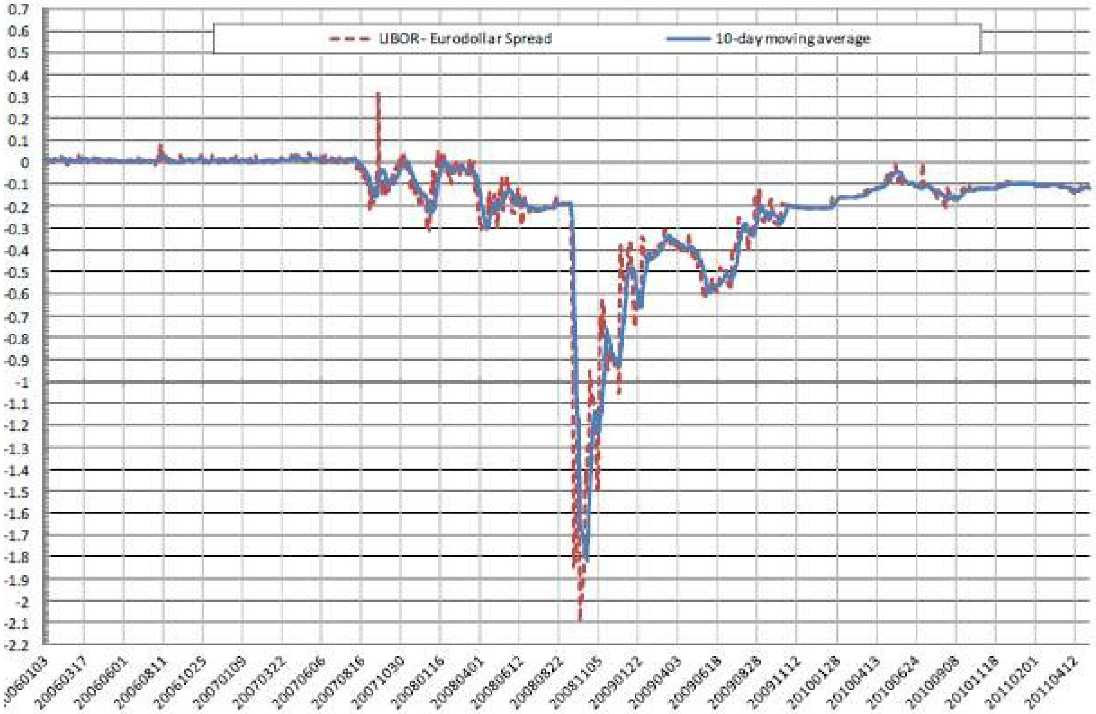


Figure A-7: Federal Reserve Eurodollar Spread for Credit Suisse USD LIBOR Submissions

Figure A-8: Federal Reserve Eurodollar Spread for Bank of America USD LIBOR Submissions

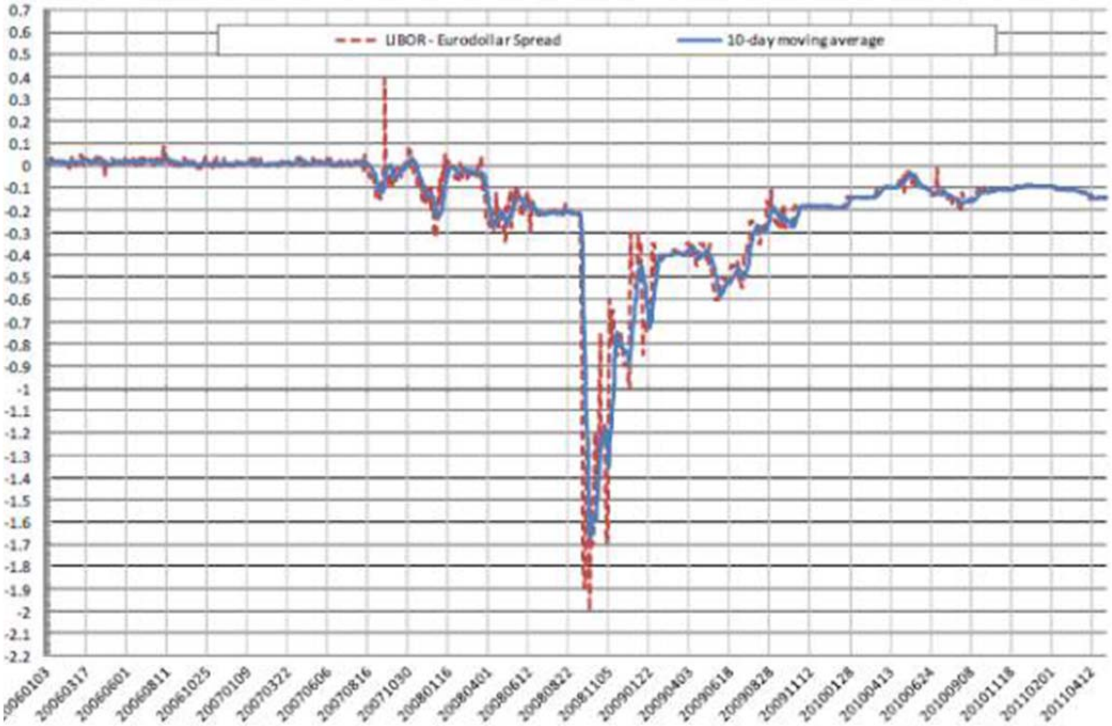


Figure A-9: Federal Reserve Eurodollar Spread for RBC USD LIBOR Submissions

Figure A-10 Federal Reserve Eurodollar Spread for Lloyds USD LIBOR Submissions

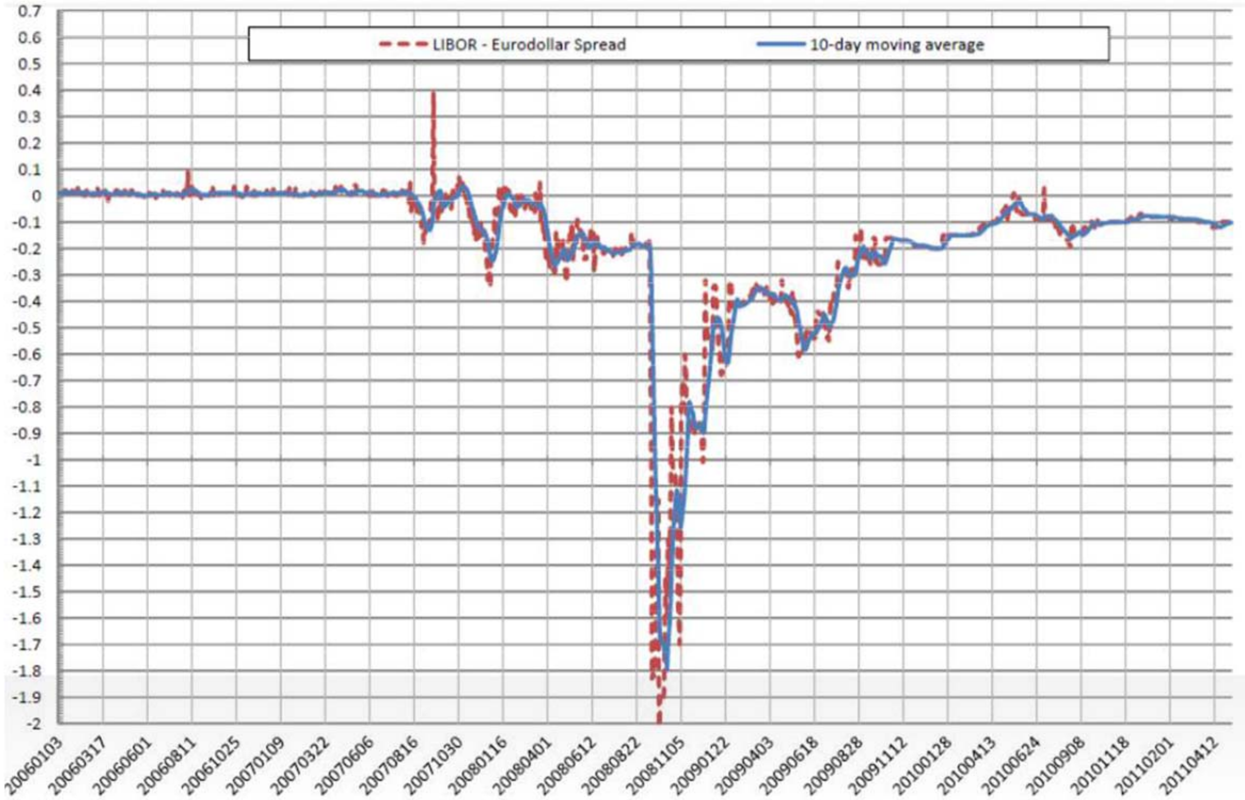


Figure A-11 Federal Reserve Eurodollar Spread for WestLB USD LIBOR Submissions

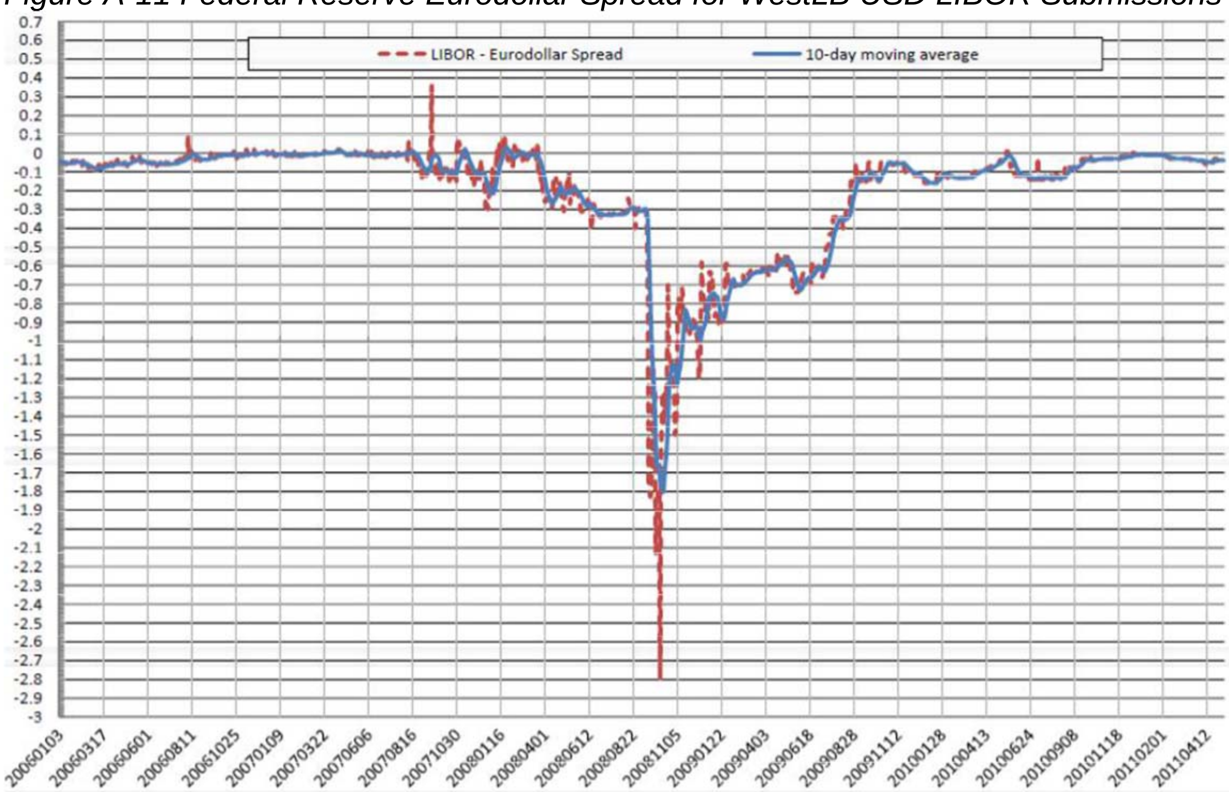


Figure A-12 Federal Reserve Eurodollar Spread for Rabobank USD LIBOR Submissions

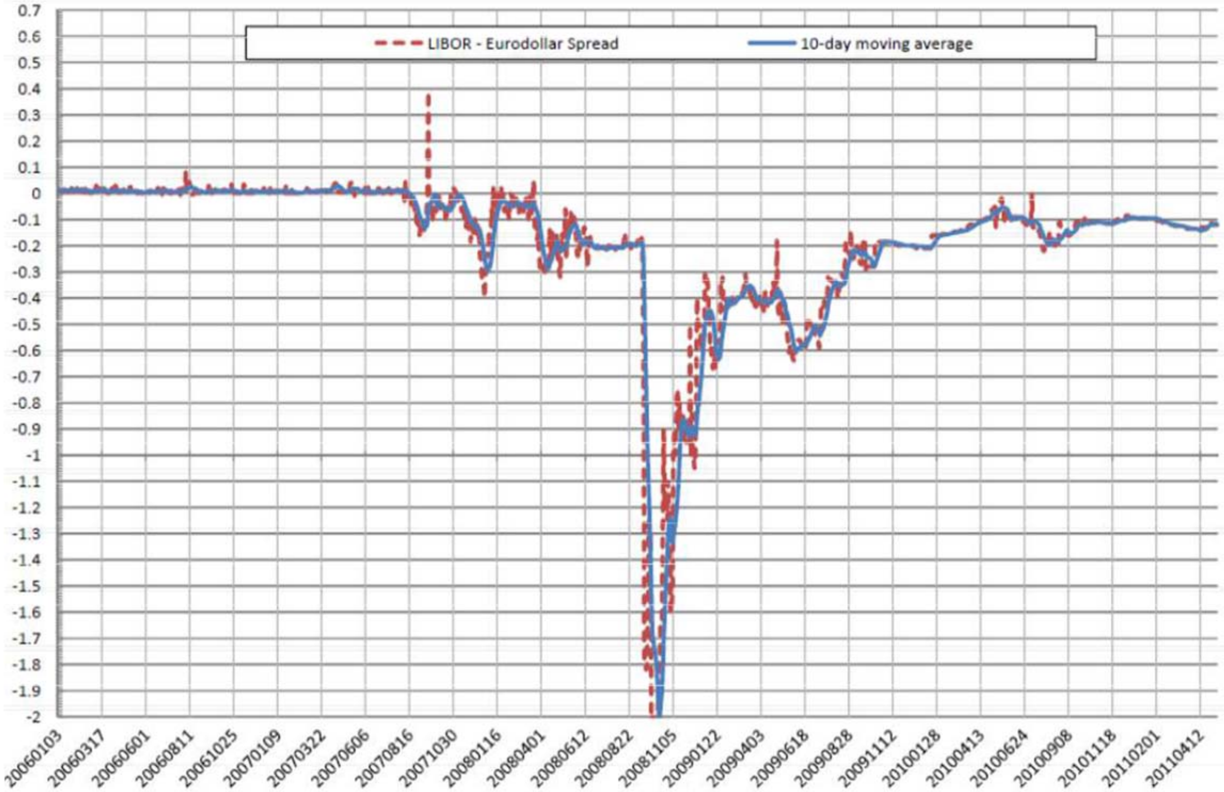


Figure A-13 Federal Reserve Eurodollar Spread for BTMU USD LIBOR Submissions

Figure A-14 Federal Reserve Eurodollar Spread for Norinchukin USD LIBOR Submissions

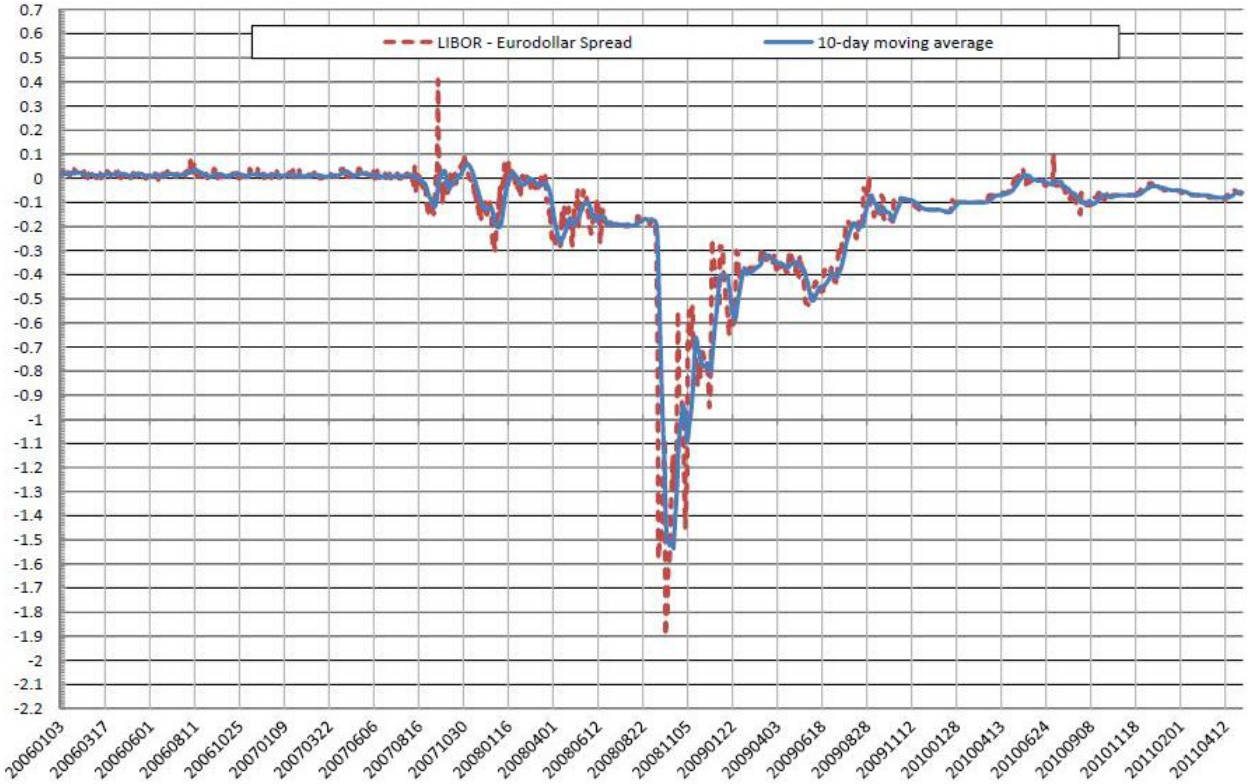


Figure A-15 Federal Reserve Eurodollar Spread for HBOS USD LIBOR Submissions

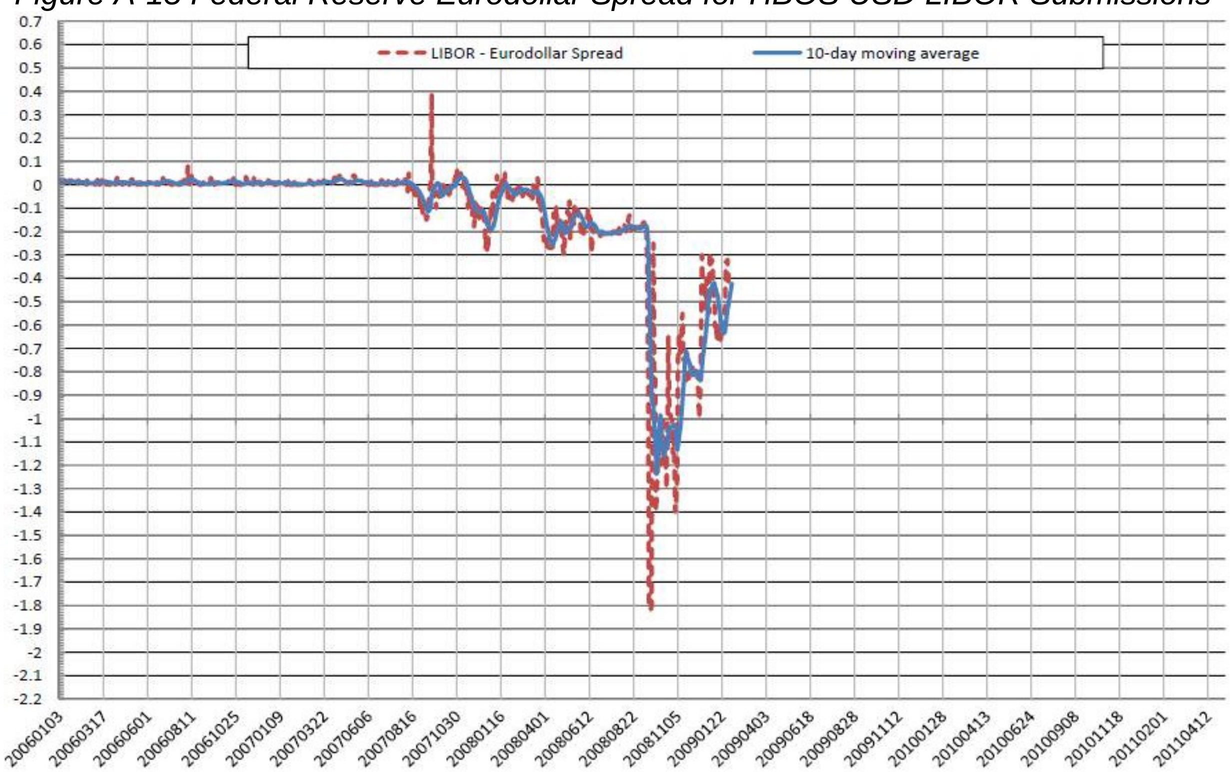
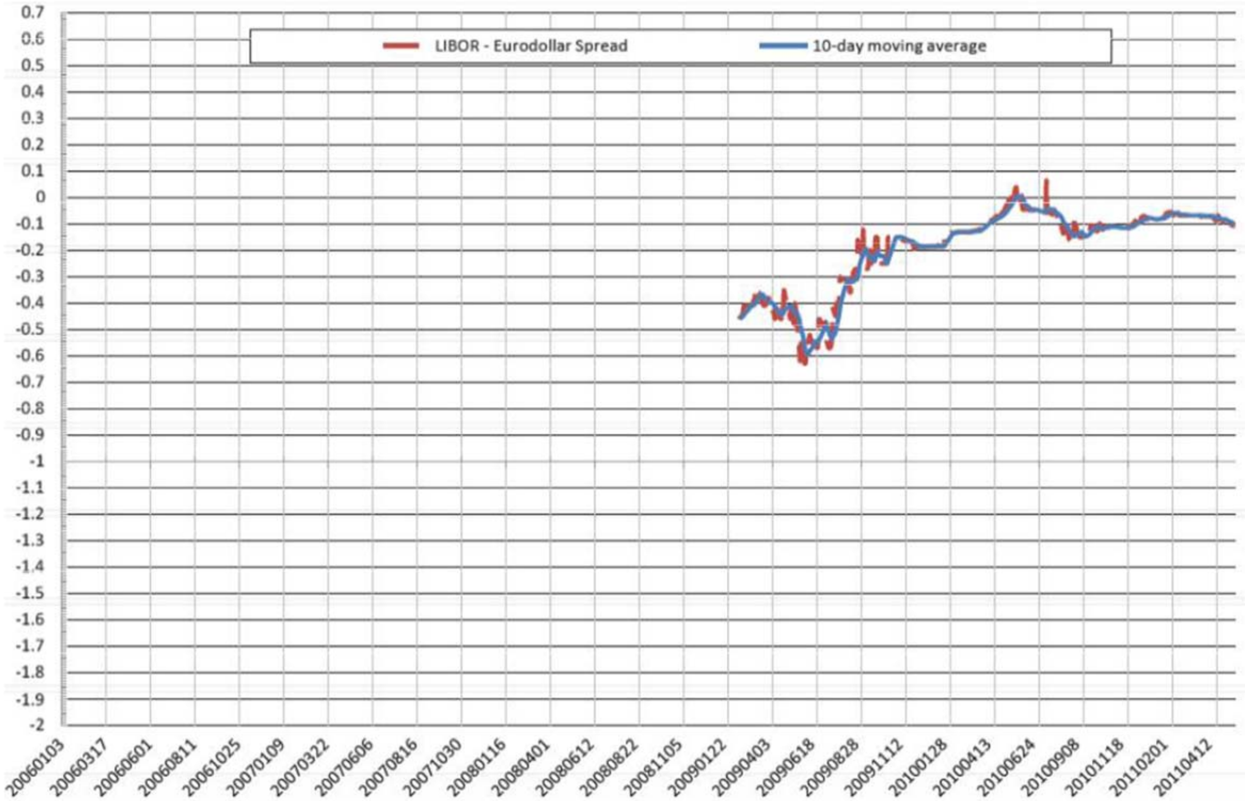


Figure A-16 Federal Reserve Eurodollar Spread for Société Générale USD LIBOR Submissions



APPENDIX B

Damages for loan identified in Paragraph 20(a), which was originated on or about July 5, 2006:

#	Period Start Date	Payment Date	Notional	USD LIBOR 3M	Eurodollar Deposit Rate 3M	'True' LIBOR 3M	Swap Fixed Rate	LIBOR Payments	Eurodollar Payments	'True' LIBOR Payments	Fixed Rate Payments	Damages Using Eurodollar Deposit Rate	Damages Using 'True' LIBOR	Damages Using Swap Fixed Rate
1	02-Jul-07	01-Oct-07	$1,296,400.00	5.36%	5.36%	5.36%	4.96%	$17,564.78	$17,564.78	$17,564.78	$16,244.78	$-	$-	$-1,320.00
2	01-Oct-07	02-Jan-08	$1,273,250.00	5.23%	5.30%	5.29%	4.96%	$17,202.67	$17,432.91	$17,406.37	$16,305.35	$230.25	$203.70	$-897.32
3	02-Jan-08	01-Apr-08	$1,250,100.00	4.68%	4.73%	4.86%	4.96%	$14,628.14	$14,782.43	$15,184.42	$15,492.47	$154.29	$556.28	$864.33
4	01-Apr-08	01-Jul-08	$1,226,950.00	2.68%	2.95%	3.06%	4.96%	$8,323.54	$9,149.30	$9,502.79	$15,374.52	$825.7 6	$1,179.26	$7,050.99
5	01-Jul-08	02-Oct-08	$1,203,800.00	2.79%	3.00%	2.97%	4.96%	$8,668.61	$9,329.45	$9,234.23	$15,415.96	$660.84	$565.61	$6,747.35
6	02-Oct-08	02-Jan-09	$1,180,650.00	4.21%	6.00%	4.88%	4.96%	$12,694.94	$18,103.30	$14,718.32	$14,956.93	$5,408.36	$2,023.38	$2,261.99
7	02-Jan-09	01-Apr-09	$1,157,500.00	1.41%	1.75%	1.83%	4.96%	$4,042.01	$5,007.80	$5,227.39	$14,185.49	$965.79	$1,185.39	$10,143.49
8	01-Apr-09	01-Jul-09	$1,134,350.00	1.18%	1.55%	1.81%	4.96%	$3,374.57	$4,444.45	$5,201.82	$14,214.18	$1,069.88	$1,827.25	$10,839.61
9	01-Jul-09	01-Oct-09	$1,111,200.00	0.59%	1.05%	0.79%	4.96%	$1,668.34	$2,981.72	$2,239.55	$14,077.11	$1,313.38	$571.21	$12,408.77
10	01-Oct-09	04-Jan-10	$1,088,050.00	0.28%	0.55%	0.34%	4.96%	$816.52	$1,579.18	$967.51	$14,233.31	$762.66	$150.98	$13,416.78
11	04-Jan-10	01-Apr-10	$1,064,900.00	0.25%	0.45%	0.33%	4.96%	$654.65	$1,158.08	$850.37	$12,757.38	$503.43	$195.72	$12,102.73

Damages for loan identified in Paragraph 20(b), which was originated on or about September 25, 2006:

#	Period Start Date	Payment Date	Notional	USD LIBOR 3M	Eurodollar Deposit Rate 3M	'True' LIBOR 3M	Swap Fixed Rate	LIBOR Payments	Eurodollar Payments	'True' LIBOR Payments	Fixed Rate Payments	Damages Using Eurodollar Deposit Rate	Damages Using 'True' LIBOR	Damages Using Swap Fixed Rate
1	02-Jul-07	02-Oct-07	$1,900,000.00	5.36%	5.36%	5.36%	5.46%	$26,025.78	$26,025.78	$26,025.78	$26,509.70	$-	$-	$483.92
2	02-Oct-07	02-Jan-08	$1,866,666.67	5.24%	5.25%	5.31%	5.46%	$24,996.74	$25,044.44	$25,351.21	$26,044.62	$47.70	$354.47	$1,047.88
3	02-Jan-08	02-Apr-08	$1,833,333.33	4.68%	4.73%	4.86%	5.46%	$21,691.25	$21,920.05	$22,516.14	$25,301.50	$228.79	$824.88	$3,610.25
4	02-Apr-08	02-Jul-08	$1,800,000.00	2.70%	2.95%	3.01%	5.46%	$12,285.00	$13,422.50	$13,676.61	$24,841.47	$1,137.50	$1,391.61	$12,556.47
5	02-Jul-08	02-Oct-08	$1,766,666.67	2.79%	3.00%	2.97%	5.46%	$12,601.98	$13,544.44	$13,428.29	$24,649.37	$942.47	$826.31	$12,047.40
6	02-Oct-08	02-Jan-09	$1,733,333.33	4.21%	6.00%	4.88%	5.46%	$18,637.67	$26,577.78	$21,608.23	$24,184.29	$7,940.11	$2,970.56	$5,546.62
7	02-Jan-09	02-Apr-09	$1,700,000.00	1.41%	1.75%	1.83%	5.46%	$6,003.13	$7,437.50	$7,763.65	$23,203.57	$1,434.38	$1,760.52	$17,200.45
8	02-Apr-09	02-Jul-09	$1,666,666.67	1.17%	1.55%	1.81%	5.46%	$4,912.06	$6,530.09	$7,608.62	$23,001.36	$1,618.03	$2,696.56	$18,089.30
9	02-Jul-09	02-Oct-09	$1,633,333.33	0.58%	1.02%	0.78%	5.46%	$2,410.53	$4,257.56	$3,235.52	$22,789.04	$1,847.03	$824.99	$20,378.51
10	02-Oct-09	04-Jan-10	$1,600,000.00	0.28%	0.55%	0.35%	5.46%	$1,186.74	$2,297.78	$1,460.12	$22,809.26	$1,111.04	$273.38	$21,622.52
11	4-Jan-10	6-Apr-10	$783,333.33	0.25%	0.45%	0.33%	5.46%	$ 509.23	$ 900.83	$ 661.48	$10,929.44	$ 391.60	$ 152.25	$10,420.21

Damages for loan identified in Paragraph 20(c), which was originated on or about February 15, 2007:

#	Period Start Date	Payment Date	Notional	USD LIBOR 3M	Eurodollar Deposit Rate 3M	'True' LIBOR 3M	Swap Fixed Rate	LIBOR Payments	Eurodollar Payments	'True' LIBOR Payments	Fixed Rate Payments	Damages Using Eurodollar Deposit Rate	Damages Using 'True' LIBOR	Damages Using Swap Fixed Rate
1	15-Mar-07	15-Jun-07	$1,152,000.00	5.35%	5.34%	5.35%	4.99%	$15,750.40	$15,720.96	$15,750.40	$14,705.15	$-29.44	$-	$-1,045.25
2	15-Jun-07	17-Sep-07	$1,137,600.00	5.36%	5.36%	5.36%	4.99%	$15,921.34	$15,921.34	$15,921.34	$14,837.02	$-	$-	$-1,084.32
3	17-Sep-07	17-Dec-07	$1,123,200.00	5.60%	5.60%	5.67%	4.99%	$15,892.42	$15,899.52	$16,101.58	$14,181.68	$7.10	$209.15	$-1,710.74
4	17-Dec-07	17-Mar-08	$1,108,800.00	4.94%	5.25%	5.09%	4.99%	$13,849.34	$14,714.70	$14,271.46	$13,999.87	$865.36	$422.13	$150.53
5	17-Mar-08	16-Jun-08	$1,094,400.00	2.58%	2.55%	3.18%	4.99%	$7,133.85	$7,054.32	$8,791.00	$13,818.05	$-79.53	$1,657.14	$6,684.20
6	16-Jun-08	15-Sep-08	$1,080,000.00	2.81%	3.10%	2.93%	4.99%	$7,678.13	$8,463.00	$8,005.64	$13,636.23	$784.88	$327.52	$5,958.11
7	15-Sep-08	15-Dec-08	$1,065,600.00	2.82%	3.00%	3.08%	4.99%	$7,585.85	$8,080.80	$8,286.91	$13,454.42	$494.95	$701.06	$5,868.57
8	15-Dec-08	16-Mar-09	$1,051,200.00	1.87%	2.55%	2.30%	4.99%	$4,972.29	$6,775.86	$6,118.55	$13,272.60	$1,803.57	$1,146.26	$8,300.31
9	16-Mar-09	15-Jun-09	$1,036,800.00	1.31%	1.65%	2.04%	4.99%	$3,429.97	$4,324.32	$5,355.44	$13,090.78	$894.35	$1,925.47	$9,660.81
10	15-Jun-09	15-Sep-09	$1,022,400.00	0.61%	1.15%	0.87%	4.99%	$1,605.25	$3,004.72	$2,271.07	$13,050.82	$1,399.47	$665.81	$11,445.57
11	15-Sep-09	15-Dec-09	$1,008,000.00	0.29%	0.50%	0.34%	4.99%	$747.53	$1,274.00	$877.62	$12,727.15	$526.47	$130.08	$11,979.62
12	15-Dec-09	16-Mar-10	$993,600.00	0.25%	0.45%	0.32%	4.99%	$636.54	$1,130.22	$798.54	$12,545.33	$493.68	$162.00	$11,908.79

Damages for loan identified in Paragraph 20(d), which was originated on or about July 14, 2006:

#	Period Start Date	Payment Date	Notional	USD LIBOR 3M	Eurodollar Deposit Rate 3M	'True' LIBOR 3M	LIBOR Payments	Eurodollar Payments	'True' LIBOR Payments	Damages Using Eurodollar Deposit Rate	Damages Using 'True' LIBOR
	01-Aug-07	01-Sep-07	$6,857,142.00	5.33%	5.32%	5.37%	$30,442.85	$30,400.00	$30,680.71	$-42.86	$237.86
	01-Sep-07	28-Sep-07	$6,857,142.00	5.77%	5.85%	5.82%	$30,506.66	$31,200.00	$31,018.48	$693.33	$511.82

Damages for loan identified in Paragraph 20(e), which was originated on or about May 2, 2007:

#	Period Start Date	Payment Date	Notional	USD LIBOR 3M	Eurodollar Deposit Rate 3M	'True' LIBOR 3M	Swap Fixed Rate	LIBOR Payments	Eurodollar Payments	'True' LIBOR Payments	Fixed Rate Payments	Damages Using Eurodollar Deposit Rate	Damages Using 'True' LIBOR	Damages Using Swap Fixed Rate
1	29-Aug-08	29-Sep-08	$5,000,000.00	2.49%	2.65%	2.67%	4.73%	$10,702.02	$11,409.72	$11,474.46	$20,359.83	$707.70	$772.44	$9,657.81
2	29-Sep-08	29-Oct-08	$5,000,000.00	3.72%	5.50%	4.44%	4.73%	$15,500.00	$22,916.67	$18,511.08	$19,703.06	$7,416.67	$3,011.08	$4,203.06
3	29-Oct-08	01-Dec-08	$5,000,000.00	3.12%	3.75%	3.47%	4.73%	$14,288.54	$17,187.50	$15,890.72	$21,673.37	$2,898.96	$1,602.18	$7,384.83
4	01-Dec-08	29-Dec-08	$5,000,000.00	1.91%	3.00%	2.20%	4.73%	$7,432.64	$11,666.67	$8,554.57	$18,389.53	$4,234.03	$1,121.93	$10,956.89
5	29-Dec-08	29-Jan-09	$5,000,000.00	0.46%	1.00%	0.60%	4.73%	$1,985.94	$4,305.56	$2,564.63	$20,359.83	$2,319.62	$578.69	$18,373.89
6	29-Jan-09	02-Mar-09	$5,000,000.00	0.41%	0.75%	0.59%	4.73%	$1,833.33	$3,333.33	$2,605.23	$21,016.60	$1,500.00	$771.90	$19,183.27
7	02-Mar-09	30-Mar-09	$5,000,000.00	0.50%	0.80%	0.76%	4.73%	$1,934.72	$3,111.11	$2,964.21	$18,389.53	$1,176.39	$1,029.49	$16,454.80
8	30-Mar-09	28-Apr-09	$5,000,000.00	0.51%	1.00%	0.80%	4.73%	$2,049.13	$4,027.78	$3,226.86	$19,046.29	$1,978.65	$1,177.73	$16,997.16
9	28-Apr-09	28-May-09	$5,000,000.00	0.43%	0.90%	0.68%	4.73%	$1,781.25	$3,750.00	$2,816.79	$19,703.06	$1,968.75	$1,035.54	$17,921.81
10	28-May-09	29-Jun-09	$5,000,000.00	0.32%	0.65%	0.49%	4.73%	$1,422.22	$2,888.89	$2,179.32	$21,016.60	$1,466.67	$757.10	$19,594.38
11	29-Jun-09	28-Jul-09	$5,000,000.00	0.31%	0.65%	0.42%	4.73%	$1,243.58	$2,618.06	$1,689.21	$19,046.29	$1,374.48	$445.63	$17,802.72
12	28-Jul-09	28-Aug-09	$5,000,000.00	0.29%	0.45%	0.33%	4.73%	$1,227.08	$1,937.50	$1,425.57	$20,359.83	$710.42	$198.49	$19,132.75
13	28-Aug-09	28-Sep-09	$5,000,000.00	0.26%	0.45%	0.33%	4.73%	$1,114.06	$1,937.50	$1,433.55	$20,359.83	$823.44	$319.49	$19,245.77
14	28-Sep-09	28-Oct-09	$5,000,000.00	0.25%	0.40%	0.29%	4.73%	$1,026.04	$1,666.67	$1,197.83	$19,703.06	$640.63	$171.79	$18,677.02
15	28-Oct-09	30-Nov-09	$5,000,000.00	0.24%	0.30%	0.26%	4.73%	$1,113.20	$1,375.00	$1,207.58	$21,673.37	$261.80	$94.38	$20,560.17
16	30-Nov-09	29-Dec-09	$5,000,000.00	0.24%	0.30%	0.28%	4.73%	$947.78	$1,208.33	$1,132.02	$19,046.29	$260.56	$184.24	$18,098.52
17	29-Dec-09	28-Jan-10	$5,000,000.00	0.23%	0.32%	0.30%	4.73%	$962.25	$1,333.33	$1,250.10	$19,703.06	$371.08	$287.85	$18,740.81
18	28-Jan-10	01-Mar-10	$5,000,000.00	0.23%	0.28%	0.28%	4.73%	$1,016.67	$1,244.44	$1,236.76	$21,016.60	$227.78	$220.09	$19,999.93
19	01-Mar-10	29-Mar-10	$5,000,000.00	0.23%	0.28%	0.30%	4.73%	$887.17	$1,088.89	$1,179.37	$18,389.53	$201.72	$292.20	$17,502.35
20	29-Mar-10	28-Apr-10	$5,000,000.00	0.25%	0.30%	0.30%	4.73%	$1,032.83	$1,250.00	$1,259.91	$19,703.06	$217.17	$227.07	$18,670.23

Damages for loan identified in Paragraph 20(f), which was originated on or about January 7, 2008:

#	Period Start Date	Payment Date	Notional	USD LIBOR 3M	Eurodollar Deposit Rate 3M	'True' LIBOR 3M	Swap Fixed Rate	LIBOR Payments	Eurodollar Payments	'True' LIBOR Payments	Fixed Rate Payments	Damages Using Eurodollar Deposit Rate	Damages Using 'True' LIBOR	Damages Using Swap Fixed Rate
1	01-Apr-08	01-Jul-08	$440,000.00	2.68%	2.95%	3.06%	3.76%	$2,984.93	$3,281.06	$3,407.82	$4,183.54	$296.13	$422.90	$1,198.61
2	01-Jul-08	02-Oct-08	$432,666.67	2.79%	3.00%	2.97%	3.76%	$3,115.65	$3,353.17	$3,318.94	$4,204.23	$237.52	$203.29	$1,088.58
3	02-Oct-08	02-Jan-09	$425,333.33	4.21%	6.00%	4.88%	3.76%	$4,573.40	$6,521.78	$5,302.33	$4,088.53	$1,948.38	$728.93	$-484.87
4	02-Jan-09	01-Apr-09	$418,000.00	1.41%	1.75%	1.83%	3.76%	$1,459.66	$1,808.43	$1,887.73	$3,887.01	$348.77	$428.07	$2,427.35
5	01-Apr-09	01-Jul-09	$410,666.67	1.18%	1.55%	1.81%	3.76%	$1,221.69	$1,609.01	$1,883.20	$3,904.64	$387.33	$661.52	$2,682.95
6	01-Jul-09	01-Oct-09	$403,333.33	0.59%	1.05%	0.79%	3.76%	$605.56	$1,082.28	$812.89	$3,877.05	$476.72	$207.33	$3,271.49
7	01-Oct-09	04-Jan-10	$396,000.00	0.28%	0.55%	0.34%	3.76%	$297.18	$574.75	$352.13	$3,930.69	$277.57	$54.95	$3,633.51
8	04-Jan-10	01-Apr-10	$388,666.67	0.25%	0.45%	0.33%	3.76%	$238.93	$422.68	$310.37	$3,533.02	$183.74	$71.44	$3,294.09